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THE GREAT EXHIBITION: 1851

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NEWS FROM THE PAST
OUIDA : A STUDY IN OSTENTATION
MRS. SIDDONS : TRAGIC ACTRESS
MRS. GASKELL (ENGLISH NOVELISTS SERIES)

Victoria and Albert Museum

THE TRANSEPT FROM THE NORTH ENTRANCE

THE GREAT EXHIBITION: 1851

by

Yvonne ffrench

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FOREWORD AND ACKNOWLEDGMENTS

The nineteenth century was the age of enthusiasm, and 1851 was the epitome of its age. Consequently, as a subject for study the Great Exhibition is at once provocative and inexhaustible. It was the work of idealists and realists. It absorbed the energies of thousands of vigorous and inventive minds, harnessed the resources of dozens of countries, and concentrated the results of innumerable unrelated activities. Because of these factors it must be looked at from many sides: it has philosophical, scientific, industrial, cultural and economic aspects, to discuss any one of which would demand the experience of a specialist and fill an entire volume.

My own purpose has been limited to an attempt to reconstruct from the enormous tide of contemporary historical material, both published and unpublished, enough matter to form a running commentary on the whole event from its inception to its ultimate fruition; so that for the general reader, overtaken by the centenary of 1851, it may be possible to see the idea as a progressive whole, while turning for details to the work of specialists.

To a large extent the raw material for this book has been gathered from the great series of papers, so far mainly unpublished and belonging to the Commissioners for the Exhibition of 1851. It is owing to their kindness that I have been allowed access. Mr. W. D. Sturch, the Secretary of the Royal Commission, in giving me every facility for research has, together with his staff, my warmly appreciative thanks.

I am indebted beside to other sources: The Royal Society of Arts through their Librarian, Mr. K. D. C. Vernon, allowed me to examine MSS. and papers relating to the Exhibition in its early stages; the Trustees of the Crystal

Palace gave me leave to inspect what remained of their records destroyed at Sydenham.

At the Victoria and Albert Museum, Mr. C. H. Gibbs-Smith, Keeper of the Department of Museum Extension Services, has given me the benefit of his experience on various aspects of the subject in addition to some stimulating comment, and has supplied me with some excellent photographic prints.

Various industrial firms with whom I have been in touch were original exhibitors or in other ways participated in the adventure of 1851. Among their present representatives, Mr. Colin H. Campbell, Chairman of Mintons Ltd., provided me with papers relating to the Great Exhibition from the archives of his company; while the Hon. G. C. H. Chubb of Messrs. Chubb & Sons Lock & Safe Co. Ltd., and Mr. C. L. Bowes of Bramahs were good enough to clarify for me certain obscurities in the famous Lock Controversy. To all three my acknowledgments are most sincerely made.

For quotations from *The Times* and for drawings reproduced from the *Illustrated London News* and *Punch* I am obliged to their respective editors.

Mrs. George Villiers kindly sanctioned the use of some passages from an article in the *Quarterly*. Three extracts are published by kind permission from *The Letters of the Prince Consort*, edited by Dr. Kurt Jagow (published by John Murray). A quotation from *Palmerston* by Philip Guedalla is made with the kind permission of the publishers, Messrs. Hodder & Stoughton, Ltd. Lady Noble has my thanks for allowing me to quote from *The Brunels: Father and Son.* Miss McIntosh kindly permitted some lines from *Patience.*

To Archbishop Mathew, Mr. G. M. Young and Mr. John Summerson I am indebted for quotations. Mr. W. D. Sturch crowned many kindnesses by reading the proofs and checking errors. Finally Mr. Philip Leigh Smith, by contributing the season ticket reproduced on page 156, has added considerably to the interest of the book, while Professor C. R. Fay, lately Reader in Economic History at Cambridge, volunteered some information for which I have been most grateful.

Y.ff.

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PART I

THE PRINCE AND THE PROJECT

"Of all decades in our history, a wise man would choose the eighteen-fifties to be young in."

G. M. Young
Victorian England

CHAPTER I

AN ELDERLY MAN, A MAN OVER FIFTY, WALKING UP the long stretch of uneven roadway linking Knightsbridge with Kensington on a summer evening in 1851, would rightly have felt at the heart of the world. If, as is likely, he was also an Englishman, his reflections on the past five decades would have been shot through with a number of mixed emotions for he would have been of those who had escaped a later school of disciplined feeling. He could still rejoice in unsophisticated reactions: wonder and awe.

On either side of him stood the symbols of mutation; of cause and effect. To his left, as he passed up the Kensington Road, could be seen looming in and out of the shadows familiar masses; great mansions, elegant museums of a departing age. Ennismore House; Park House; Gore House. To his right, beyond trees and the park railings, glimmering like a brittle but gigantic chrysalis, arose, burnished in the sunset, the vast structure that was drawing half the civilised world to its doors.

Now it was empty; deserted but for the force of police guarding its treasures. Yet, as he walked on toward Kensington, its presence, sensed rather than perceived, would have filled an Englishman's mind with innumerable conscious and unconscious reflections.

He could look backward to thirty-six years of unbroken peace. The *feux-de-joie* of 1815 were to him a memory of boyhood, and he had been swept into maturity on the incoming breakers of idealism and social progress. In youth his movements had been slow and circumscribed; he had lumbered to school in a creaking coach. Now, in middle age, he

rolled, although still hazardously, across England by train in a matter of hours.

The gloomy terrors of ill-lit streets had in his lifetime been dispelled by the introduction of gas-lighting. Electricity was already in use. At home, not least among the century's blessings, he could remember the innovation of the paraffin lamp. Public health had been made safer in a number of ways. Stone water-pipes replaced the old, insanitary wooden conduits; steam-heating had been introduced. In the manufacturing industries machinery had revolutionised production, the wool trade alone was a revealing example. Mr. McAdam, a benefactor to all but horses, had been successfully engaged in converting the roads of England, and within a decade the old surfaces of mud and pot-hole had yielded to smooth highways of pounded granite.

In science discoveries, in industry inventions were continual sources of speculation and wonder. The mysterious was explained; the unimaginable experienced. Ideas, too, had altered as radically as customs, and had produced action and reaction. Yet still, over the horizon arose the distant smoke-stacks of human advance: new creeds, new systems, new philosophies. To be sure, the worst had not yet happened; the man of 1851 could still, in practice at least, ignore the more discouraging aspects of his generation. For the bogey of Evolution—in print at all events—was still some eight years off, while Tennyson's ringing fatalism captured and prepared the land.

The air of the 'thirties had been thick with reform; few had doubted its necessity. And as the ebbing 'forties beached their flotsam in tragic quantities upon the western coasts of Britain the country's population was swollen overnight by half-a-million victims of the disastrous Irish famine, thrown destitute upon the strained resources of Poor Law Relief. The potato failure was a recent event. So was the repeal of the

Corn Laws, and any number of improving commissions and committees had carved their way through the tangle of abuses caused by rapid industrial growth. Over-crowding; insanitation; negro slave labour; factory acts, religious disabilities, poor laws, criminal laws, health legislation and handloom weavers had all been the objects of official inquiry, and reforms though still overdue were at least in hand.

Yet all was not quite so well as might have appeared. Agriculture, once the pride of the country, lay neglected and nearly moribund, as decaying fields and crumbling cottages bore witness. Factories had been run up all over the country at an irresponsible speed; so had the dwellings and tenements which choked their surroundings like spawning mushrooms at the foot of a tree.

It was the age of exuberance, of wealth, of invention and audacity. The countryside had been rapidly depopulated in order to swell the teeming cities and add to the problems of harassed housing authorities. It mattered little. It was all part of Progress, and Progress was identical with the spirit of the age. For this reason there was a sense of optimism abroad.

There had been, it is true, some uneasy, even some ugly moments. Incidents stung the memory. Peterloo for instance; Luddites smashing machinery county by county; the dismay caused by Chartism. Still nearer the alarm three years before, when England, too, had seemed to catch the scorching heat from across the Channel. And indeed at that time foreign affairs had had the whole country on guard. Absolutism, the old danger-signal, had reared a hydra head on the Continent, provoking at home a foreign policy that hinged on the support of Constitutionalism in the few States not enmeshed in the Coalition of Powers. The Duke of Wellington, basking out his last years in the warmth of public affection, had agitated openly on the awkward subject of National Defence. There had

been only one effective answer. Lord John Russell gave it. He stepped up taxation to meet increased Service estimates. But the scare had passed, and in the main, seen from the vantage of this crowning year Progress seemed to have been continuous, uninterrupted, irresistible. Optimism was high; the reign still young. By the mid-century more changes had been seen than in any equivalent period in the nation's history, and these in the space of a generation had revolutionised everyday life. Progress, having sponsored steam-engines, had turned its back on the old stage-coach and installed the railway.

Thus, continuing his evening walk toward the old suburb of Kensington, an Englishman meditating on the assets and liabilities of the half-century would have had every reason for confidence as he surveyed conditions under the early, golden age of the reign of Queen Victoria.

* * * * *

For nearly ten years a new influence had been permeating the English outlook, asserting itself by degrees and almost imperceptibly. An influence altogether foreign; a respectable influence, destined to work its leavening way downward from the topmost social level until it had impregnated the enormous receptive body of middle-class habit. Nearly ten years had passed since the entry into English public life of Albert of Saxe-Coburg-Gotha, better known by his official style of Prince Consort.

Immense disadvantages had, to begin with, frayed the path of this handsome and philosophical youth. His impeccable character, his cultured tastes, his charming appearance, even his sense of duty had been used against him during the wave of anger which had greeted his arrival. He had been the victim of faction, studied hostility and palace intrigue. And a victim it had been expected he would remain, inconspicuous and uninfluential. The old prejudice against

the foreigner held fast; the conviction that he would be bound to meddle inconveniently in politics. This conviction had been strengthened as well by an assumption that the castle of Rosenau with its romantic turrets among the wooded slopes of Coburg formed an inadequate springboard from which to dive into the strong current of affairs of State.

Be this as it may Prince Albert had overcome these early drawbacks. Character, judgment and determination had helped him. And since, at the beginning of his married life the chief privileges of his position had been denied him, and he had found himself excluded from State secrets, his plans for the welfare of his new countrymen had been restricted to the radius of a few intimate correspondents: they in fact existed mostly on paper. Thereafter he turned for an outlet to his natural tastes: to music, art, science, culture. Interests through which he might still hope to exert some influence by releasing energies all but stifled in those early years of marriage by his dominant Queen and her pragmatical advisers.

It had not been easy. His abilities were offset by his manner. He was reserved and withdrawn; extremely shy in public and giving an unfortunate impression of *hauteur*. It may have been only an impression; it was one which, however, remained. Then, too, he was a German, and a particularly studious one at that, and studious princes were apt to bore a generation in which masculine values were still assessed in Corinthian terms.

So Prince Albert had been ill prepared to confront the world which awaited him at the time of his marriage. The free and easy English society that flourished with its roots in Whiggism and its branches in privilege, was a robust, sceptical, cynical society; still aristocratic, still fashionable, highly scandalous, profligate, a trifle tarnished. To a young man without allies it was an inimical society against which to run, with its contempt for respectability, and its lingering

if insatiable addiction to the pleasures of the defunct Regency. Its deep play, its hard drinking, all the excesses which accompanied that old, tough generation into the silence of their marmoreal, if gouty tombs seemed like an outrage to the integrity of the young reformer from Rosenau.

He might, in view of these disadvantages, have become a nonentity. It turned out otherwise; character came to his rescue.

In time he had worked out a plan to create a position which he alone could fill without either alarming the Government, disturbing public opinion or trespassing on the Queen's prerogative. He had come to the decision that it would be in the best interests of the country if he could win for the Crown certain over-riding powers to be used at its discretion, if and when the need should arise. He had succeeded in establishing his point constitutionally, with himself as the Queen's adviser and sole link with the State. Deliberately, therefore, he had set out to become the best-informed man in the kingdom. Since he was thorough, systematic, patient and pertinacious he succeeded. He kept abreast of everything: politics, economics, social developments, and the intricacies of foreign affairs. In times of anxiety he consulted his old adviser, Baron Stockmar.

His day is well known. The early rising—it was seven even in winter—to study by the light of the green reading lamp brought over from Germany, the first of many innovations. Later, the few moments robbed from duty to write a quiet line home to Coburg before the day began. Then the Queen's arrival; the neighbouring desks; the shared duties; the mutual support.

There were the occasional retreats to Osborne, the island refuge, where, abandoned to the warm summer days while the Queen sat under the trees and the children chased butterflies, he exercised his diligent brain over his new and improved plan for sewage,

which was intended to cost a fraction of existing systems and thus introduce great economies. Here, sipping the Ragotzky waters from Bad Kissingen, he meditated his plan, satisfied that it cost next to nothing. But he was a theorist, and like all theorists most unpractical. His sewage system turned out an utter failure.

It is easy to smile. It would be easy to sigh. It is still easier to understand the strong leaning to the company of intellectual equals of a man scholarly by nature, solitary by circumstance, and limited to the society of a wife who, while she enjoyed a constitutional advantage, was greatly his intellectual inferior. He naturally gravitated towards the centres of learning, of philanthropy and science, the only places where, perhaps, he felt himself thoroughly at home.

* * * * *

Scattered throughout London and the provinces are those centres of independent cultural and intellectual activity, the learned societies. For the most part enshrined in Augustan buildings designed in a rational age for enlightened objects they came into existence at a time when speculative thought was beginning to range beyond immediate scientific discovery. Their members met on common ground for purposes of discussion or interchange of ideas on the particular branch of activity in which their society was interested. These, as institutions, are essentially of the eighteenth century, reflecting its comfortable leisured patronage of the arts and sciences, and the civilising spirit in which their investigations were conducted.

Their very premises are equated with the dissemination of truth. Humanism breathes out of every pane of their light and airy windows. In all things reasonable and clear they seem to guarantee enlightenment to the enquiring mind. In their panelled lecture-rooms, their proportionate and solid libraries, their pillared halls, their marble busts, their classical

façades and solid brickwork, their readings, their papers, their discourses and conversaziones they contribute clear, if chilly, tributaries to the stream of humanism.

To centres like these, with their instructive character the Prince was directly attracted. Learning was in his blood; so was a love of the arts. In 1841 he had headed the Royal Commission on rebuilding the Houses of Parliament. Later on had come the Chancellorship of Cambridge University. He was drawn as well to the numerous philanthropic organisations of which the reforming energies of the century had produced a substantial crop. He was welcomed. Not as a mere figurehead, but as a worker who, beside being interested in a subject, had mastered it as well and kept in touch with its development.

There was therefore small cause for surprise when, under these circumstances his patronage was invited. He became president of the Society for Improving the Conditions of the Labouring Classes, with whose housing distresses in particular he was taking positive action. He was a governor of the Royal Agricultural Society; a patron of the Servants' Providential and Benevolent Society, and of several others. His predominating interest in connection with them all was the dispelling of ignorance, and the absolute necessity for education, enlightenment and progress. But first and foremost to his mind came education in cultural affairs, conscious of which necessity he accepted the Presidency of the Society for the Encouragement of Arts, Manufactures and Commerce, more familiarly known as the Society of Arts.

The aims of this society, which had been in existence for almost a century and had a distinguished past, were implicit in its name. It existed for the advancement, development and application of every department of science in connection with arts, manufacture and commerce. In its early years, a period of great activity, it had chiefly addressed itself to the improve-

ment of the most important and most backward English industry: agriculture. Premiums had been offered to competitors for whatever objects the society considered deserving of improvement. In 1760 it had organised an Exhibition of Contemporary Art, which led eight years later to the foundation of the Royal Academy. It was the first exhibition of consequence to be held in England. This phase, however, did not outlast the century, and by 1800 the Society was turning its attention to the support of colonial productions. But these interests, too, appear gradually to have lessened in importance. Latterly its activities had shown symptoms of declining energy.

There was, of course, nothing particularly new in the idea of exhibitions as such. On a restricted scale they had long been acknowledged as valuable methods of instruction and comparison in special branches of culture, and the idea of assembling from many sources for competitive purposes all sorts of industrial products in order to stimulate trade and encourage invention had been current throughout Europe at one time or another since the Middle Ages. In the old German fairs arts and crafts had rubbed shoulders with elementary labour-saving contrivances. Painting and sculpture, tapestries and metal-work, jewellery and singular mechanical devices had been brought together from great distances. At intervals the idea had been revived in France, but not until 1798 does anything serious appear to have been carried out in this particular direction, and then only on a strictly national scale. There, under the impulse of change and the Directorate a regular series of exhibitions had been quinquennially established, and these had become one of the country's national institutions.

In England all relative efforts had been disappointing. In 1829 some papers had been read before members of the Society of Arts on aspects of national industries, in support of which had followed some attempts at collecting specimens of raw material,

manufactures and new inventions which were in turn displayed in the Society's rooms in the Adelphi. To these displays the public was invited, but evinced little interest. The Royal Dublin Society had gone cheerfully ahead since 1824 with a triennial display of arts, manufactures and agriculture, but the eighteenth-century curiosity was subsiding, and at least in so far as concerned the Society of Arts the public had become more or less indifferent to its activities; manufacturers even hostile. For this reason perhaps its efforts had declined. It was a disheartening state of affairs. All the same, one undeniably encouraging factor had emerged from these trials and experiments. In standard and quality a distinct improvement was perceptible among the manufactures themselves.

Matters had reached this stage when, in 1845, the Prince Consort accepted an invitation from the Society of Arts to become its President, upon which he procured it a Royal Charter from the Queen.

* * * * *

Within a year of electing their new President, the Royal Society of Arts acquired another asset. This was in the dynamic personality of Henry Cole, whose claims as the real begetter of the Great Exhibition have been advanced by himself. It is true that he performed marvels, but then so did others, and Francis Fuller, for instance, another member, declared in an aggrieved testamentary document[1] that he himself was the originator. Queen Victoria claimed the honour for her husband, and the fact is that there was some truth in each story. The action has several principals, not one among whom could have brought it off unaided.

All the same Cole, like the Prince Consort, had most exceptional qualities. What is more he took an active part in the enterprise from the earliest moment up to the very last. The two men share equal honours.

[1] *Royal Society of Arts Archives.*

Henry Cole had begun to make his mark some ten years earlier; first at the Record Office as an assistant keeper, where he had been instrumental in effecting reforms; later at the Post Office, where he had helped to introduce Penny Postage, a conception intended even at that time to be pregnant with public benefits. Benefits to religion, to morals, to health and to science. To commerce, to education, to arts, crafts, and, in the long run, international peace. Freedom of correspondence was to stimulate freedom of thought, and freedom of thought was to be the romantic means to that imperishable end. To Cole, nurtured on Free Trade, there seemed no limit to the possibilities which might arise.

At the Post Office, working for Rowland Hill, he occupied himself with the design and production of stamps. He was later translated to the Treasury, whose premium he won for the best stamp design, after which he was in considerable demand as a publicist. Cobden offered him the secretaryship of the anti-Corn Law League; railway companies competed for his services; he was ready to take on anything, however specialised. He is found supporting uniformity of gauge in *Inconsistencies of Men of Genius*, a pamphlet attacking the formidable Brunel. Whatever he undertook he drove at with concentration. His zeal and enthusiasm were infectious. He was the very man to get a move on; to snip red tape, to avoid formalities and conventions, to reach his objective by whatever route seemed most practicable.

His methods were certainly unorthodox, sometimes devious; more rewarding perhaps in his official life than in some of his other pursuits. That passion for developing the fine arts which sprang indirectly from his early work at the Record Office, where he had known Palgrave and become absorbed in mediaevalism, was to bear curious fruit. He was gifted and versatile. He painted—his water colours are still

admired—he etched, he studied typography. He wrote and illustrated under the pseudonym "Felix Summerly" a number of charming handbooks and guides to some of the national collections, in the preparation of which he had taken up the study of fine arts which he was anxious to restore to a more honoured position. Later, to divert and instruct his children, he published Summerly's *Home Treasury*, a series of juvenile books, had them illustrated by the best contemporary artists, and, having examined various aspects of book production—he took in his stride lithography, book-binding, engraving, woodcuts, facsimile and the influence of Bewick upon black-and-white illustrations—went on to study design in fields which were to yield a greater harvest.

* * * * *

For some time past the Prince Consort, convinced of the need for raising the standard of British industrial design, had been feeling his way towards a means of restoring the balance between quality and taste in manufactures. A too exclusive concentration upon a half-century of purely mechanical wonders had succeeded, in the space of a single generation, in ruthlessly exterminating aesthetic values in all industries; and under the resounding successes of commerce itself, design for its own sake, seemed fated to be submerged for good. The Society of Arts had done what it could; had attempted to gather together its spasmodic collections. But response had been meagre. What there was had been disappointing, and their efforts had seemed about to flag altogether when they turned for assistance to their Royal President. He at any rate had some constructive ideas.

He suggested the assembling of periodic exhibitions of industrial products by the Society. A committee was formed, but made no headway owing to public indifference and the suspicion of manufacturers. No money was forthcoming. Neither were there promises

of support, nor even of sympathy. The idea was abandoned.

If it seemed to have failed, for the Prince at least it was not a profitless experience. He reflected on the lessons of the setback. He concluded that before any good could come of cultural excursions of this nature it would be necessary first to awaken the public to the value of such industrial exhibitions, by which he implied their influence on character, and their effect on commerce. There was much to be done. The Society began again; this time on new lines. They had evolved a scheme of instruction which included the offering of premiums for special works on industrial art. Simultaneously they organised small, specialised exhibitions. Public interest needed stimulus; manufacturers to be convinced. That same winter they offered prizes for the design of certain articles of common domestic use: a tea-service and some beer jugs; manufactured articles simple in form, but harmonious in design. Cole rushed to compete. He seized hold of Herbert Minton, the china manufacturer, a reluctant participator who dreaded the tyranny of London retailers, and talked him into submitting a design for the beer jugs. He himself set to work on the tea-set. At Stoke-on-Trent Cole personally superintended the modelling and entire production of a tea-service to his own design, bearing in mind certain basic principles: plainness, cheapness, elegance, and beauty commensurate with cost.

In due course the tea-set and beer jugs were exhibited in the Adelphi rooms in the summer of 1846. Both won the Society's silver medal, and the *Summerly tea-service*, as it was called, eventually led to the Great Exhibition, for upon these prize-winning exhibits the Society based its subsequent policy. The journey, however, was a long one. At the present day there seems nothing particularly striking about this tea-service. It is plain, it is simple, it is all white. But at that time, and after nearly a generation of

ornate and meaningless decoration in the cheaper classes of industrial wares, it symbolised a return to aesthetic simplicity and individual artistic consciousness. At any rate it was one of the few novelties which the Society of Arts could show in their summer display in 1846, and it caught the attention of the Prince Consort. He examined it carefully, especially praised the milk-jug with its rather unpractical three-lipped etruscan neck, observed the importance of uniting quality with elegance, stressed the need for improving the taste of the working-classes, and impressed on the Society its responsibilities in this direction.

The Summerly tea-service turned out extremely popular. It sold in thousands, and continued to do so for a very long time afterwards. All the same, enthusiasm for exhibitions and art in general was not what had been hoped; ignorance and indifference among the public were as widespread as ever, and no understanding yet existed as to their importance. Competitors were few; judgment difficult. But now, guided by the Prince and fired by Cole the Royal Society of Arts redoubled its efforts, increased the value of its premiums, and prayed for worthier results.

Cole had meanwhile become a member of the Society's council; a kind of unofficial adviser in the matter of decorative art. He had his own policy, and now set off on an entirely new line, the production of *Art Manufactures*, a term of his own defining the union of fine arts with mechanical productions. For the word Art in its commoner, more general connotation, seems to have come first into popular use about 1851, a convenient date for recording the beginning of aesthetic mass-production. A year when art silk and art bindings, art notepaper and art lampshades, art leather, art cushions, art magazines and art writers began to come into their own. A year which stands as witness to the results of all Cole's efforts; a year which saw the mass-realisation of his earlier experiments.

He now lost no time in getting to work. He mobilised artists, designers and manufacturers. These in turn stated their objects in a manifesto. The age of art for art's sake was on the way. They declared their intention to aim at pure forms executed in various substances: in metals, woods, wares and glass. Their productions were to be known as *Summerly's Art Manufactures*; cheapness was to be a feature, accessibility to all. They were frankly self-conscious.

Their first show took place in 1847 in the rooms of the Society of Arts. Cole, who had sensed a further disastrous display of apathy, had stirred up a handful of important manufacturers, enough to provide a substantial contribution.

"We have no doubt", concluded the introduction to the catalogue,[1]

> "that after the eyes of the public are familiarised with specimens of the best decorative art, they will prefer them to subjects which are vulgar and gaudy; and that after a series of such annual exhibitions no manufacturer will have to complain that his best productions are left on his hands, and his worst preferred."

The result was a triumph. Twenty thousand people went to the Society's rooms that year. Twenty thousand potential customers had seen the manufacturers' wares direct from their warehouses, and had learnt to discriminate good from bad, uninfluenced by the bigotry of retailers. The display of 1848, with its attendance of seventy thousand, was irresistible proof of awakening interest, and by the summer of 1849 no fewer than three exhibitions were to be seen in England. At the Adelphi rooms precedent was eclipsed. The Queen contributed works of art, and was followed by others. Prince Albert conferred medals and offered prizes. The idea of such a collection on a national scale had at last taken root; cautiously the Government promised a site. They

[1] *Royal Society of Arts Archives.*

offered the courtyard of Somerset House, already in the hands of the Board of Trade, with whose co-operation it was agreed that the Society of Arts should, every fourth year, "make a collected exhibition of the principal subjects exhibited in the previous years, and of others expressly prepared for the special purpose, and that such national exhibitions should take place in some large building purposely provided, if not at the cost of the Government, at least with the Government's sanction."[1] Public opinion had ripened sufficiently for the Prince to carry his project a stage further and to prepare the ground for a great national Exhibition.

[1] *Official Illustrated Catalogue of the International Exhibition, London* 1862. Vol. I, iii.

CHAPTER II

DURING THE SUMMER OF 1849 MATTHEW DIGBY WYATT was sent by the Royal Society of Arts to Paris to report on the eleventh Quinquennial Exposition of French Industry then taking place, in order to obtain ideas and suggestions for the Society's own quinquennial exhibition due two years later. Wyatt, young and enterprising, was impressed by the long tradition of excellence in French manufactures, and in a full report presented the President and Council of the Society with his conclusions. They tended to argue in favour of mediocrity for the many rather than superiority for the few.

Henry Cole, whose head was whirling with future plans—plans for an Ancient and Mediaeval Arts Exposition in 1850, plans for something even more ambitious later on—Henry Cole accompanied his colleague, and if he endured as he confessed the unforgettable midnight stench of the emptying cesspools at his hotel, he also heard some very interesting facts, and received some information which caused his brain to whirl even faster. For while in Paris he was told all about M. Buffet, the Minister for Agriculture and Commerce, and his speech some months earlier to the French Chamber during which he had proposed that the coming French Exposition should be planned on an international scale.

The Chamber had rejected the suggestion, but at the very idea of it Cole's imagination had caught fire. Utopian visions, never far distant, passed before his mind. Free Trade, like a goddess in a triumphal chariot floated before him attended by all her infinite possibilities: Peace, Abundance and Prosperity. Industrial aggressiveness would in time replace military

aggression, and with rivalries abolished and economic security assured the world would be made safer for Cobdenism.

He talked the whole thing over with Wyatt, "and I collected", he goes on to say in his Memoirs,[1] "all the opinions I could on the question if the British Exhibition of 1851 should be National or International." Herbert Minton was also in Paris, and Cole consulted him too. Minton, habitually cautious and conservative though he was, at once approved the international principle, and Cole, encouraged and inspired by this decisive visit, returned to London.

At about this time another member of the Society of Arts, Francis Fuller, had also been to Paris. On the return journey he met at Southampton Thomas Cubitt, the builder, then enlarging Osborne for the Royal Family. They travelled up to London together. In the train Fuller discussed his visit to Paris. He then went further. He enlarged upon expositions in general and suggested, vaguely to begin with, a far more comprehensive scheme; one in which all nations might join, in London, perhaps. Possibly under the auspices of Prince Albert whose enlightened leadership would inspire the whole of the civilised world. The hint fell upon friendly ears. Two days later Cubitt, returning to Osborne, repeated the entire conversation to the Prince.

In the meantime Fuller had written to John Scott Russell, Secretary to the Society of Arts, stating his conviction that England in 1851 could and might well outshine France in 1849.

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On June 14 the annual prize-giving had taken place in the Adelphi rooms of the Society. The Prince Consort distributed the prizes. Scott Russell spoke. He referred, after previous submission of his text, to the President's wish for the formation of a large and

[1] Cole, Sir Henry : *Fifty Years of Public Work*, 1884.

comprehensive exhibition on a national scale in two years' time. That evening he and Cole were invited to Fuller's house, to discuss the situation and arrange details. Events sprang forward. Scott Russell was sent for a few days later, for a formal explanation of his public statement and an informal discussion of its implications. Then came the turn of Cole. He was commanded to attend at Buckingham Palace on June 29. It was ostensibly a routine visit to discuss with Colonel Phipps, the Prince's secretary, the exact date for a proposed appointment. Conveniently and as though by accident the Prince himself walked into the room and opened the subject.

It should be, he thought, a large exhibition, possibly to be housed somewhere in the neglected quarter of Leicester Square—at which point Cole broke in to urge a more pressing question than either site or building. What, he enquired, was to be the main character of the exhibition? National—or International? The Prince deliberated for a moment, then quietly decided. "It must", he declared, "embrace foreign productions . . . international, certainly."

In justice to the author of a scheme so audacious and so vast in scope, credit must be equally shared between four men. Between M. Buffet for the original conception, Cole and Fuller for their imaginative grasp of its potentialities, and the Prince Consort for his personal initiative in sponsoring the plan.

So in principle at least, although far from concrete or even approaching an official stage, the main idea was born. As a site Leicester Square shared the fate of Somerset House. It was dropped as being totally inadequate. Cole alternatively suggested Hyde Park. The Prince agreed, asked him to report upon a site calculated to meet all requirements, mentioned the expediency of forming a Royal Commission to establish the scheme, and the meeting was at an end.

Cole lost not a moment; he gave a thorough inspection to the site he had in mind, and the same

evening his report was ready. He presented it to the Prince the next day when, at Buckingham Palace, a deputation from the Society of Arts attended on their President. It was the first outward sign of august support. It was far from official, far from definite, but it was all the same an immense advance. The deputation consisted of four of the most active members of the Society of Arts: Thomas Cubitt, a veteran member; Scott Russell, the Society's secretary; Fuller, brought in by Russell as the man most likely to find a willing contractor, and, lastly, Henry Cole himself.

This meeting on June 30, 1849, proved to be historic. During its course the Prince Consort adverted to what he described as a remarkable conversation that he had had with Mr. Cubitt, and invited Mr. Fuller for more details, asked Mr. Scott Russell to keep the minutes, and then proceeded to state his own views. As the four members listened to his words their most ambitious expectations were fulfilled. The Prince calmly proposed the formation of "a great collection of works of Industry and Art to be held in London in 1851 for the purposes of Exhibition, Competition and Encouragement." The whole subject was carefully examined, and a minute that proves the personal initiative of Prince Albert in a matter sometimes debated by sceptics, was presented to him by Scott Russell. For the Prince revised it. After his alteration its meaning was unmistakeable:

> It was a question whether this Exhibition should be exclusively limited to British Industry. It was considered that, whilst it appears an error to fix any limitation to the Production of Machinery, Science and Taste which are of no country but belong as a whole to the civilised world, particular advantage to British Industry might be derived from placing it in fair competition with that of other Nations.

In this manner, and by a few strokes of the pen, the character of the whole project was transformed. It

was to be completely changed. For the first time a purely British concern was to become an international event. At the back of the Prince's mind was the persistent idea of international competition, with its mutually rewarding consequences; fresh openings, new markets, stimulation of effort, higher standards of manufactures, increased output, greater originality, better quality and design. And, as a long term result, a higher standard of living among competing nations. The new era had arrived, and with it Progress; change for the better. So had science, steam-engines and the permanent way. To prise open the world's locked treasury, to arrive at some estimate of that vast imponderable wealth of nations; to take stock of the universal capacity for continual output and continuous improvement; to defy, if need be, the Natural Law itself in the interests of peace, prosperity and the Benthamite principle was to be the moral justification of the Great Exhibition.

Its commercial justification was plain for almost all to see.

Cole was triumphant. From that moment onward he left nothing to chance. In his efforts to convert dream into reality he worked with something approaching transcendental energy. He persuaded, he pleaded, he cajoled and he bullied. He was here, there and everywhere. Sometimes burrowing underground in order to obtain his ends. At others bluffing his way through a difficulty. He neglected no opportunities to push through his scheme. He dangled it temptingly like a bait before the eyes of interested parties. He was perpetually snapping at the heels of Cabinet Ministers. From the start he had had his eye on Sir Robert Peel, then leading the Opposition, and he determined to secure his support as a sign of unanimity between the parties at least in one matter. A passing reference in a speech would do something to strengthen this impression; perhaps a complimentary dinner which the Society proposed to give

Mr. Etty,[1] "in the midst of his pictures," would be an appropriate occasion; one in which Prince Albert's interest in art would be of essential use. A word in time, and the Society would invite Peel to take the Chair. Methods like these, importunate and persevering, were bound in the end to succeed.

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On July 14 another meeting was held. This time at Osborne, when Cole, Fuller and Scott Russell were presented by the Prince to some of Her Majesty's Ministers. On this occasion Sir Robert Peel was certainly present, and speaking personally, he approved of the idea of the exhibition. But as an Elder Statesman he roundly declared that until a sufficient number of manufacturers should have been found willing to support the scheme, he strongly advised Prince Albert and the Ministers present to have nothing to do with it. There was plainly no more to be done. The manufacturers had so far not been consulted, the proceedings came to an abrupt close, and the deputation from the Society of Arts was bowed out of the room. But they were not allowed altogether to disappear. The Prince went after them and invited them to remain to lunch after the Ministers should have departed. At table Fuller spoke for himself and his colleagues, declaring them all determined to canvass every manufacturer in the country. They drafted a form of procedure, and on departing were instructed to report in September at Balmoral. It had been a highly successful outing. Things had gone so well that they missed the Cowes boat back to the mainland and were run across to Southampton in the Queen's yacht *Fairy*.

In their view much had been accomplished. For it was imperative that absolute confidence in the scheme as a whole should exist from the outset. This confidence it was obvious to all could only be given by

[1] *1851 Commissioners' Records.*

the guiding presence of a Royal Commission whose members, irreproachable in public life, high in esteem and remote from corrupting influences were not liable to the sway of competitors' passions or to feelings of their own. Thus all accusations of partiality or undue influence would be ruled out. The Commission would be a Tribunal, appointed by the Crown and sanctioned by the nation. It would inspire confidence at home, where in the provinces especially such an adventurous expedition might seem a dangerous heresy, and abroad, in countries where exhibitions were well known but commonly subsidised by their own Governments.

These arguments had particularly impressed Henry Labouchere,[1] who was then President of the Board of Trade; he asked for more information and decided to refer the matter to the Cabinet.

It was mid-July. In Parliament the session was moving to its close. The Cabinet were shortly to disperse until October. For the time nothing more could be done. The interval was to be employed by the Society of Arts in collecting evidence of the amount of support that might be expected from manufacturers and industrial circles throughout the kingdom. This, at least, was Labouchere's advice. Cole thought otherwise. His rebellious instinct sensed the development of a vicious circle. The lack of a commission was spoiling his plans—always intolerant of prudence, impatient of red-tape entanglements. Direct action was the proper course, and he began to agitate for it. He wrote to Colonel Phipps, urging no delay; he clamoured for the commission to be formed before the passage of more time. Every month was precious, and indeed his point of view was understandable. The Society of Arts, a body without funds could not begin to collect them until it could point to a Royal Commission as the guarantee for their proper expenditure. The sum of £100,000 was needed before

[1] 1st Baron Taunton.

1851. Cubitt had estimated that an appropriate building would cost at least £75,000, and prizes were to be offered on a scale generous enough to break down the prejudices and scruples of the toughest manufacturer. In short, the bait was to total £20,000.

The season was propitious; money was in the air. Business prospered. The prorogation of Parliament, the languid summer days, the attractive topic of the Paris Exposition and the attention it was causing were all indicative of the importance of immediate action. At all costs the commission should at least be issued. The matter was being urged on Cole by influential persons; it need after all be pledged to nothing more than an enquiry. He vented these feelings in a letter to Colonel Phipps.

It was impetuous, it was characteristically enthusiastic. It was Cole all over. But he was to be shown quite plainly who was master. Phipps' reply was courteous but explicit. The Prince's views were clearly defined. The curb applied; the rebel disciplined. He did not, for instance, agree with Cole's ideas. He felt that the Council of the Society of Arts might usefully and beneficially exert itself in feeling the public pulse and in estimating the probable amount of subscriptions. But it was an immense undertaking of very great national importance; "A question so large", continued the Private Secretary,

> "that the Government would not in H.R.H.'s opinion be justified in any way committing themselves upon it without mature consideration in the Cabinet—for it is one that once undertaken no Government could venture to give a careless or a cold support to."
>
> "The Prince thinks that if the plan is to be matured under his auspices, He must be the Person to treat with the Cabinet Ministers upon it (which indeed is his place as President of the Society of Arts) and that he must be guided by his own discretion (willingly receiving all suggestions and advice) as to the urgency of the time of the decision of the question. . . . H R.H. is willing to undertake all the negotiations with the Cabinet—but he

cannot think that any good would be derived from pressing the subject upon an unwilling or hurried attention, when the alternative of not incurring a responsibility which they had not time fully to consider would only be the rejection of the proposal."[1]

It was clear, at any rate, that to look to the Government for financial assistance in the opening stages would be hopeless. They had declared as much. They had let it be understood that they were unwilling so much as to provide red tape for tying the correspondence. It was more necessary than ever to secure the Exhibition and protect its exalted promoter.

As things turned out the Prince's advice, so cool and sensible, was well judged. It carried with it a stiff reminder of royal authority, and was something of a setback for a hot-head like Cole. Still, he accepted the rebuke with grace and, though chap-fallen, came quietly to heel in accordance with his President's wishes.

A fortnight later the Prince Consort himself authorised Cole, Fuller and Scott Russell to tour the manufacturing districts, canvass the leading industrialists, obtain their support and convince the Government. The Home Secretary had been informed of the preparations under way; the Government's decision was hoped for within a reasonable period since time was short, and preliminaries would be immense.

Directly Prince Albert's instructions reached him, Cole, taking with him Fuller, turned up at Osborne, where they were joined by Scott Russell. The problem they discussed was paramount: funds, and contingent liabilities. It may clarify the reader to a certain extent if the financial situation is explained.

At a meeting held some time earlier by the Council of the Society of Arts it had been unanimously resolved that no financial risks could be taken by the Society itself since it had no funds of its own to dispose of, but that a loan contractor should be found who would

[1] *1851 Commissioners' Records.*

be both able and willing to deposit £20,000, receiving in return 5 per cent. on his outlay and a share of one-half of the contingent profits.

Such a man was not easy to discover; particularly since one obstacle was plain for all to see. How, in fact, was it going to be possible to fill the heart of a loan contractor with confidence without at the same time committing the Prince in his intention of fathering the Exhibition? Six or seven capitalists had already been sounded and all had refused. Cole had gone so far as to open negotiations with a Mr. Peache, but had subsequently dropped him "because he wanted too much power".[1] In these circumstances Francis Fuller had written to his father-in-law, a Mr. Drew.

George Drew was solicitor to a firm of contractors for public works, the Messrs. James and George Munday. Through his agency an understanding was reached, and on August 23 an agreement was concluded.

It bound the contractors to advance a loan for the prizes, preliminary expenses and the security of such a building as might be approved by the promoters. An advance deposit of £500 was made to the Society's bankers, and £20,000 was to be paid on the completion of the deeds, the contractor engaging to pay all expenses of agents, advertising and printing out of his profits, and to receive four-sixths of the receipts in return in order to ensure smooth over-all running.

On the Society's side receipts by which the contractor might be remunerated were anticipated from three main sources. Voluntary subscriptions; rents of stalls; admissions of visitors. The preliminary expenses would, it was expected, thus be covered without need to apply for public funds, and would yield the contractor a profit for his risk. If, on the other hand, after depositing the initial £20,000, he were to fail,

[1] *1851 Commissioners' Records.*

then he would forfeit the sum and the Society seek another capitalist.

From the start a certain belief had prevailed among members of the Council that public opinion would eventually ripen and the Government feel obliged to support the undertaking, once it was well on its feet and on the way to success. With this in mind, Cole, who felt strongly on the subject, proposed a scheme enabling the Treasury to sponsor the enterprise, themselves replacing the private contractor. His methods, whatever they were, are hidden from us now, but he was a master at obtaining his ends. He actually talked the contractors into inserting a clause in the contract empowering the Council of the Society of Arts to cancel the agreement if requested by the Treasury within a certain date, provision being made to refund Mundays the sums they had already advanced "together with a fair compensation for the outlay and risk they might have incurred",[1] to be settled by arbitration and by an agreed date.

Thus, the Messrs. Munday signed away the chances of a lifetime, stipulating, as they did so, to withdraw if no Royal Commission were appointed. They were thanked by the Prince, who praised both their liberality and their public spirit. Also, on behalf of the Society, by Cole who tactfully hinted to Drew his personal opportunity to thank the Prince Consort for such an expression of trust.

On November 7 the contract was signed. To carry it into effect an Executive Committee was formed, appointed by the Society of Arts. The chairman was Robert Stephenson, M.P., who had helped his father to develop "The Rocket". The other members were Henry Cole, Charles Wentworth Dilke the younger, Francis Fuller who had found the contractors, and, for the contractors themselves, George Drew, their own nominee.

As the certainty of prizes was considered

[1] *1851 Commissioners' Records.*

indispensable to public confidence, without which no Royal Commission could be issued, Cole, Fuller and Scott Russell were empowered to travel round the manufacturing districts of the United Kingdom, furnished with letters of introduction and with instructions to report back to Prince Albert early in October for submission of information by himself to the Government.

They were supplied with up-to-date minutes of meetings, and though allowed to show them confidentially to those concerned, were specially cautioned against public misinterpretation of their official or authoritative nature.

Thus, on the eve of their projected tour, both Cole and Fuller felt their position immensely strengthened. By September they were in the thick of investigations. They had been all over the country; interviewing mayors, representatives of chambers of commerce and commercial associations, beside the leading manufacturers. In the meantime Cole was keeping the Prince up to date, bombarding him with letters, reports and threatened visits, the last of which materialised on the 3rd, when he and Fuller dropped in almost casually at Balmoral, taking along with them for presentation their secretary, Digby Wyatt.

They reported on their tour and its results. They had not done badly, when their activities are considered. They had been to Manchester, Sheffield, Leeds, Bradford, Rochdale, Huddersfield, Kendal, Glasgow and the Staffordshire Potteries. They were able as a result to present the Prince with a declaration of support and co-operation by the great manufacturing firms they had interviewed.

After this they crossed to Ireland, where Cole's impetuosity led him into his first pitfall. In Dublin at the Mansion House, the deputation were introduced by the Lord Mayor to a private meeting of manufacturers, and various other representative persons. Cole was invited to say a few words. He complied.

He said a little too much. He referred glowingly, too glowingly, to the Prince's interest and to his active inquiries. As he went on he became carried away. "The Prince", he stressed, "was not moved to those inquiries by any man or any body of men; he was himself the principal mover; it was his own spontaneous act, irrespective of external influence." Words could not have been more untimely. But if Cole crossed his *t's*, Fuller dotted his *i's*: wherever he and Cole had been, and they had consulted the most prominent industrialists in every district, they were forced to the conclusion that "the best informed man they came in contact with was the Prince himself." Nothing could have been more unfortunate. Reporters were present unknown to the speakers, and long accounts of the meeting and the speeches appeared in some of the London papers. The *Dublin Evening Post* went so far as to forecast the distribution of prizes by the Queen, not content with which it dilated on the nature of the awards.

The Prince's secretary, Colonel Phipps,[1] forwarded a report of these proceedings to Balmoral, emphasising his dislike at hearing the Royal praises "however just, so loudly sounded by persons going about under an authority" granted by the Prince himself, and deploring the premature development of matters in hand. Prince Albert replied promptly, agreeing with Colonel Phipps' views, "and I would beg you to remind Mr. Cole that the strictest privacy was originally observed, and to caution him not to be drawn away by degrees from the original position. Praising me at meetings looks as if I were to be advertised and used as a means of drawing a full house . . . Mr. Cole excused himself about Dublin . . . in London additional caution will be required."[2] As to linking the Queen's name with possible prizes this was another very serious matter. The Queen's

[1] Later Sir Charles Beaumont Phipps.

[2] *1851 Commissioners' Records.*

name was never to be pledged to anything without her express sanction. She had never given any assurance that she would present prizes; every time this was suggested hopes were raised and disappointments laid in store. And in any case prizes were not even to be discussed until a Royal Commission had been called into being. Cole was abject, wrote a grovelling letter of apology, and at future appearances in public became almost mute for fear of misinterpretation.

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He lost no time in getting out his Report. It was ready by October, and set out the result of his and Fuller's investigations. Singly, jointly or with Scott Russell and Digby Wyatt they had visited Manchester, the Potteries, Sheffield, Bradford, Leeds, Huddersfield, Nottingham, Derby, Newcastle upon Tyne, Coventry, Birmingham, Kendal, Maidstone, Canterbury, Dover. Edinburgh, Glasgow, Paisley, Stirling, Perth, Dundee, Greenock, Dublin and Belfast.

Manchester in particular had greeted them with enthusiasm. They had intended to limit their investigations to manufacturers, but found themselves swamped with inquiries from merchants and others even more remotely concerned. Their tour had been successful, profitable, instructive. They had achieved all and more than they had hoped for. It seemed to be realised everywhere that the international character of the Exhibition was of outstanding importance, and free competition was the order of the day. Lancashire more than most shone with this realisation. It was all for "a clear stage and no favour."[1] Again and again this aspect was stressed. Manufacturers, carried away by idealist concepts, were alleged to prefer universality to nationality. The excellent motive was as highly desirable as it was to compare English productions with those of foreigners. In any case it

[1] *1851 Commissioners' Records.*

seemed agreed that most manufacturers had too high an opinion of their own excellence, and it was necessary that they should measure it by that of others. Others, more hard-headed, concurred with the scheme on lines both more practical and less broad. The Exhibition, it was said in Edinburgh, would be undoubtedly beneficial. Its tendency would be "to rub the sharp corners of many nations off."[1] The report, like everything to do with Cole, was not without a humanity that caught the imagination. There was the inevitable old lady who volunteered to subscribe her crown so long as "no part of the expenses came out of taxes, but not otherwise." Public sentiment had been canvassed and faithfully noted; the report anticipated the Public Opinion Poll. Finally, it confirmed one matter in which all were agreed: the absolute necessity of a Royal Commission alone able to bestow the halo of impartiality about the decisions as to prizes.

Simultaneously with the completion of the report, *The Times* came in on the side of the angels, the archangel among which, Prince Albert, was acknowledged his country's creditor on account of the pacific congress which he had proposed to the world.

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Matters were moving faster. During October twenty-seven members of the Society of Arts were invited to the Mansion House to meet a gathering of city magnates. They were first received in a private room, then taken to the Egyptian Hall, where between three and four hundred merchants, bankers and city traders were assembled. Cole spoke. This time with a greater feeling of freedom. He outlined the project; quoted from the minutes; gave the assembly a colourful peep at the wonders to be expected. He conjured up raw materials in abundance

[1] *1851 Commissioners' Records.*

from the round earth's imagined corners. The Exhibition, in fact, was to be representative of the very best works in all their classes that the world could show. Animal substances would include immense elephant tusks; beaver from Baffin's Bay, wool from Australia and Tibet. Wool, too, from Yorkshire. Silk would be brought from Europe and from Asia. There would be vegetable products: spices from the East; hops from Kent. Raisins from Malaga, olives from Southern Europe. The list was inexhaustible. He pursued it with elegance and enthusiasm; sketched the outline of the enterprise to date, referred in passing to the prizes, and hoped to defray expenses without Government aid. He made a joke about Scotsmen, and another about Irishmen. It was a very successful meeting. It won praise both for the Prince and the project, and general applause for the spirit of free competition. Cole concluded his speech by mentioning the direct benefits which might accrue to London from this unusual enterprise. He spoke of the advent of foreign buyers, of the swarms of pleasure seekers; of the scientists anxious for further enlightenment. London, in short, was to be host at "an intellectual festival of peaceful industry . . . a festival such as the world had never before seen." A resolution was passed that the cost should be provided by voluntary contributions and not by general taxation, and it favoured the appointment of a Royal Commission.

A week later Cole was summoned to Windsor. The sands of official caution were running out and would not be renewed. The Government had finally come to a decision, and had consented to issue the Royal Commission. The Prince asked Cole to sound various influential men whether they would agree to be included in the list of members, and he favoured the appointment of two secretaries; one for the Government, one for the Society of Arts. Although the Commissioners were in principle to be members of the Society in association with *ex-officio* members of

the Government, there was later a final review of selections when it was agreed to include the heads of various learned societies; so that when the Commission should finally be announed it would be found to include representatives from all the main sections of the community and all the principal walks of life.

Transactions like these, requiring a combination of official competence with personal adroitness fell naturally to the lot of Henry Cole, as the Prince instinctively seemed to have grasped. The two men had complementary talents. If the Prince's guidance was inspiring, it was frequently out of reach, drifting in a stratosphere of philosophic theory. It was Cole's vivid imagination and tremendous drive that converted theory into actual fact. Without Prince Albert, as many supposed, the whole machinery of the Exhibition would have come apart and fallen to pieces. Without Cole, it would have stopped altogether. The Prince provided the spark; Cole was the motor. He used his imagination; he was a power-house of ideas. He had industry, impetuosity, and boundless enthusiasm. He was infinitely resourceful, and his apparently inexhaustible store of nervous energy kept the machinery of organisation at full speed. His activities were endless. He got out a paper at the Prince's request with reference to the awards, and invited suggestions. This, however, was held over pending the approval of the Commission, the issue of which still hung fire. At the end of November he was writing officially to General Grey[1] quoting the opinion of Herbert Minton and others, that no manufacturers should sit upon the Commission, and saying that the influential Alderman Neild, of Manchester, expressing the same view had "quite laughed at the notion of manufacturers judging on the interests of cotton printing."[2] In fact trade jealousies were

1 Who succeeded Colonel Phipps as Private Secretary to Prince Albert, 1849.

2 *1851 Commissioners' Records.*

expected to be very keen indeed, and Cole, advising confidential views as to the names of manufacturers, applauded the Prince's suggestion to invite local Committees to elect their representatives: a plan best suited to deal with expected difficulties.

The latent uneasiness which was being felt in some quarters with regard to the Munday contract with its speculative element and its taint of jobbery, was brought to a head at the turn of the year. The Mayor of Manchester in a series of agitated letters begged the Prime Minister and the President of the Board of Trade to receive a deputation from his own district composed of men who were expected to play leading parts in their local committees, and who might fairly be considered as representing enlightened local opinion. At a private meeting enough disquiet had been revealed to justify mayoral interference on behalf of the locality. He requested an interview and was passed to Mr. Labouchere. There was evident ground for dissatisfaction, both as to proposed arrangements in regard to contracts as well as to prizes among many who were likely to be subscribers and contributors. It was imperative that the scheme should not be distrusted at the outset by the all-important manufacturing districts. In short, the local committees whose opinion on the main features of the scheme should have been consulted, had been ignored; short-circuited as it might have been by the Munday contract. Enquiry, called for, was now due.

Labouchere answered conciliatingly, and evaded coming to grips with the deputation. But the Mayor returned to the attack, urgently soliciting an interview before the issue of a Royal Commission. He was forestalled. It was announced on January 4, 1850, the very day on which he wrote.

CHAPTER III

THE NAMES OF THE COMMISSIONERS WERE PUBLISHED on January 4, 1850, and solemnly endorsed by the national press. *The Times* subjected each member to its own inflexible scrutiny, and found fault with only one. Beyond doubt it was now clear that the Government having decided to act was to do so impartially.

With Prince Albert heading the list as their President the Commissioners were admitted to be thoroughly representative of national integrity; their twenty-four members embodied every shade of opinion and every branch of interest throughout the country. Not all were active: those that were so performed Herculean tasks. The majority were mainly influential; the Duke of Buccleuch, for instance, an ex-President of the Council, was mostly absent and attended few meetings; Lord Ellesmere, crippled with gout, accepted principally from a desire not to let down the Commission. Then there were Lord Rosse, representing science, Lord Stanley, and Lord Granville, Lord John Russell and Sir Robert Peel. Henry Labouchere was active; so, moderately, was his colleague, young Mr. Gladstone; Sir Archibald Galloway represented the East India Company. The arts were prominent: sculpture identified with Sir Richard Westmacott; architecture with Charles Barry; painting with Charles Lock Eastlake. Geology was embodied in Sir Charles Lyell; mercantile interests in Thomas Baring; cotton and other manufactures in Messrs. T. Bazley and Richard Cobden. In conclusion came William Cubitt, the engineer; Philip Pusey for agriculture; while Samuel Jones

Loyd, T. F. Gibson, W. Thompson and John Gott were representative of various City interests.

Thus, peers and privy councillors, artists and scientists, financiers and industrialists formed an imposing group round their royal president. All were given a pat of approval by *The Times*. All, that is, excepting one: "Mr. Eastlake is, we think, rather unfortunately selected as a representative of pictorial art." On the other hand what a glow radiated from the inclusion of those two sturdy opponents, Lord John Russell and Sir Robert Peel. It would be no English list without their names. "These are the two pillars of public affairs in England," it continued augustly, "and of course without them the Commission would fall to the ground." But although these last two powerful supports were undeniable, their influence was more moral than active. Indeed, among the twenty-four Commissioners some five may be said to have given the Exhibition their energies, and of those five two men gave almost everything: Prince Albert, untiring, careful, endlessly watchful, and Lord Granville who acted as Vice-President. Peel certainly threw in the weight of his influence, but within six months he was dead. And Lord John Russell appears to have entertained cordiality rather than enthusiasm toward the whole scheme. He had other matters, more pressing, on which to dwell.

There were among the rest, it is true, many useful and keen supporters: Labouchere at the Board of Trade; the rising Gladstone; Cobden, for instance. Charles Barry, actively interested though crushed by the weight of the Houses of Parliament, and William Cubitt,[1] President of the Institution of Civil Engineers.

At the same time, if the Great Exhibition were to owe its success to the efforts of any individual member

[1] Not to be confused with Thomas Cubitt the builder, and early sponsor of the Great Exhibition.

of the Royal Commission apart from the Prince Consort, that member would be its Chairman, Lord Granville.

This was an excellent appointment. A man whose strength lay in tact, good sense, and powers of conciliation was necessary to keep in touch with the progress of the Commission, and to report back regularly to its President.

Like most of the men actively concerned with the genesis of 1851 he was young; still in his middle thirties, Vice-President of the Board of Trade, and, before two years were out, destined to succeed the fallen Palmerston for a brief interval at the Foreign Office. Supple, cultured, sure of himself; exactly fitted for mediation, and with an unexpected capacity for an immense amount of conscientious work, Granville's was the ideal appointment for steering clear of the difficulties which bristled out in every direction from the eleven committees set up by the Commissioners. He himself was connected with eight of them: chairman both of the Finance Committee and the Committee for Communicating with the Local Committees of the Metropolis; a member of the Subscriptions Committee, the Contract Committee, the Prices of Admission Committee, the Catalogue Committee and the Surplus Committee. Through all the intricacies of which he persevered, good-humoured, serene and imperturbable.

He lacked, possibly, the utopian idealism of Prince Albert as much as, on the other hand, he lacked the infectious enthusiasm of Cole. His background was after all the sophisticated cosmology of the Whigs. Their oligarchic tradition streamed in his veins. So did an unexpected sense of dedication that was increased by the spirit of the century. Exclusive, patrician, indolent, more than a little sceptical, Lord Granville accepted as natural the full weight and responsibility of public service. Odious to the

Palmerstons,[1] a true Liberal, he was Granville the Polite, the Prince's man and the Exhibition's devoted servant.

* * * * *

Very naturally the contract came up for discussion among the Commissioners at the earliest opportunity. There was neither time nor dignity to be lost if the agreement was to be annulled before Feburary 1, the day of expiry. As had been foreseen the public was becoming belatedly Exhibition-minded, and aware of the unsuitability of seeing a national undertaking financed by a private firm. The Manchester deputation had still to be received and answered; attacks were becoming frequent and increasingly vociferous. Among the first to go for the Society of Arts had been the *Literary Gazette*, which did not hesitate to spare the Prince. He was offensively referred to as having been superseded by the Messrs. Munday, whose enterprise should henceforth be known as *James and George Munday's Exposition of the Industry of All Nations, and especially of their own.* A Munday Exposition it would indeed turn out to be, with Munday prizes and Munday profits. And as for the gentlemen who negotiated the *Mundayan* agreement, they were given no quarter: they were under fire from every side.

It was in this electric atmosphere that the Commissioners assembled for the first time to discuss their project, and found cancellation to be desirable. Voluntary contributions were now to win the day, replacing private financing. And although the contract itself was not in principle discredited the Commissioners while praising the intention of the Society of Arts and the liberal spirit of the Messrs. Munday decided that

> "the maintenance of any contract, giving to a great national undertaking the appearance of a private specula-

[1] "A young lordling who has done nothing but dance attendance on Albert and patch up differences among the Crystal Palace Commissioners . . ." Lady Palmerston was to complain.—Guedalla, *Palmerston*, p. 325

tion, would not be consonant with public feeling, and would endanger the success of the Exhibition both at home and abroad "[1]

At the same time neither they nor the Treasury were prepared to take on either risks or liabilities. The money was to be found by the public, since the public were clamouring for the privilege. Yet, even admitting a doubtful element in the manner in which the transactions had been arranged, the critics were being a little unfair. It was one thing to clamour for voluntary contributions and Government support at a time when the scheme was receiving nation-wide interest; it had been quite another matter when, several months earlier, the small group of enthusiasts had looked around for financial support in vain.

Meanwhile the deputation from Manchester was still awaiting a reply, still soliciting an interview. They had confidence, it is true, in the Commissioners, but believed their actions were being hampered by those of the Executive Committee. Labouchere was all for conciliating them; he wished them to be received, if possible by the Prince, in the House of Lords, and satisfied with such assurances as he could give them. But they changed their tactics. In the end they never turned up. They attended, instead, the Manchester Committee, where they spoke their minds with regard to the unseemly haste and underhand manner in which the London proceedings appeared to have been conducted.

A few days later, and as though under pressure of public opinion, the Munday contract was abruptly terminated. Henceforward the Great Exhibition was to be a strictly national concern. To a cynic it might just have appeared as if the Messrs. Munday had been used as a bait to draw out national pride. But then the age was not a cynical one.

By this time Local Committees[2] had sprung up all

[1] *1851 Commissioners' Records.*

[2] Eventually 297 were set up.

over the country, and local Commissioners were being appointed to advise them with special reference to the particular interest they were to represent, whether it might be calico-printing, ship-building or silk-weaving. Altogether, a sound local organisation was needed throughout the country, to collect subscriptions, spread information, and ascertain particulars concerning exhibits; to arrange, to propagate, and in general to inform.

In view of the Prince's original recommendation two joint secretaries were appointed to the Commissioners; Stafford Northcote[1] for themselves, and John Scott Russell,[2] the naval architect and engineer, for the Society of Arts. The posts were paid, although there was something of a struggle to obtain their salaries. The Treasury, which had talked of £800 and promised £700, finally came down to £600 as adequate remuneration for each. Even then there were causes for delay, and Scott Russell, an aggressive character, drew the whole of his in advance and afterwards never turned up at the meetings excepting on state occasions. Northcote on the other hand, pleading frequent absences, placed his salary in the hands of the Commissioners and delegated his work to E. A. Bowring,[3] who ended by acting for both absentees.

Digby Wyatt remained on as secretary to the Executive Committee, receiving his salary from the Society of Arts, and details of business requiring special investigation were entrusted to a number of committees composed of specialists in the subjects under consideration, together with one or more Commissioners.

Funds to the value of £20,000 were jointly invested in the names of Lords Northampton and Clarendon, Sir J. P. Boileau and a Mr. Peache, for the award of

[1] Stafford Henry Northcote, later 1st Earl of Iddesleigh.

[2] A specialist in hydrodynamics, and discoverer of the "Great Solitary Wave of Translation."

[3] Edgar A. Bowing, an official at the Board of Trade.

prizes and medals. Treasurers for all receipts arising from donations, subscriptions or any other source, were Messrs. A. K. Barclay, William Cotton, and Samuel Morton Peto; Sir J. W. Lubbock and Baron Lionel de Rothschild. Treasurers for the Exhibition funds were Messrs. Peter le Neve Foster, Joseph Payne and Thomas Winkworth.

Then, by January 26, the Executive Committee decided to resign, feeling obliged to do so on account of their increasingly anomalous position. But after discussion among the Commissioners it was decided that their experience was too valuable to lose and that they had better be reorganised and regrouped. Northcote complained that he had too much to do and that most of the Commission's work was likely to fall on him; he had to hold the sub-committees together and was threatened with an enormous amount of work. Stephenson retired from the chairmanship in order later on to join the Commission, and his place was taken by Lieut.-Colonel William Reid, R.E., a public servant of some distinction; a meteorological expert, and a learned exponent of the theory of circular hurricanes. Drew and Fuller, though still nominally on the Executive Committee soon declared themselves unable to devote much time to their duties, so that the whole brunt of the Committee's work fell on the shoulders of Reid, Cole and Dilke. They had almost everything to do. Their eyes were on every department; planning, arranging, organising, letter-writing, the last of which duties fell to Dilke. But during that first early, embryonic stage when nothing concrete existed save in the imagination and energy of a handful of enthusiasts, the mail was slight enough; a mere trickle of correspondence. Twelve months later letters were pouring out of Dilke's office at the rate of a hundred a day, and, at the climax of the Exhibition itself,[1] over a thousand.

[1] October 9, 1851, an exceptional day, when letters approached the 8,000 mark.

The resignation of the Executive Committee had not been altogether without its humorous aspect. There is more than a suggestion of that mutual rivalry involving individual prestige so familiar among primadonnas. Cole and Dilke, themselves put out by the proposed appointment of Colonel Reid, had tactlessly and prematurely informed Stephenson of the projected step. Consequently the trio drew up and signed a form of resignation from the Executive Committee, so that even after Granville and Labouchere had seen Stephenson and smoothed things down, he still wished to withdraw. As for Cole, although in his heart resignation was the last thing he desired he continued to dilly and dally with the idea. For a while, at least, he seems to have felt it incumbent on him and was finally dissuaded from doing so by Grey's assurance that such a step was in fact far from being necessary, or even advisable; that Reid was known and respected as a public man; and that Cole's resignation at such a moment would be ascribed to jealousy, or, at the very least, to dislike of having someone above him. That his motive, in short, would never be understood. To be fair to him, it should be pointed out that he was in a huff not so much on account of his subordination to Reid as that by the regrouping of the Executive Committee he was relegated to the position of Drew and Fuller, who neither would nor could perform the services of which he was both willing and capable. He was hesitating, he was still unconvinced.

The Finance Committee next got to work on him; he was invited to remain if his salary be arranged to his satisfaction. The Finance Committee flattered him. A few days later, soothed in his feelings, he climbed down from his uncomfortable attitude and wrote to Granville confirming his acceptance. The fact was that separation from the Exhibition's fate was, for him, unthinkable. Too much involved with its existence, he could never have willingly abandoned it, and from that time forward he worked harmoni-

ously with Reid and Dilke,[1] in the absence of Fuller and Drew, who very early gave up attending to work.

So fiery, touchy, versatile, and intractable Henry Cole returned to his team. The weight he shouldered was frequently more than his own fair share. Sometimes when the whole machine became bogged it was solely due to his own violent efforts that it began to move again. Without him it would have slowed down, stuck, and come to a standstill.

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Having now taken on full responsibility for finding the necessary funds for carrying on the Exhibition, the Commissioners set about the business of raising subscriptions. By the Prince it was thought vital that no misunderstanding should exist; it should be quite clear that, in deference to the supposed wishes of the public, the contract had been abandoned, and a certainty thus exchanged for a gamble on the yield of contributions. That for good or ill the success or failure of the Exhibition now depended entirely on the manner in which contributors came forward.

Before anything else a guarantee fund was necessary. Cole had proposed one for the purpose of buildings and other preparations. Yet this, it was feared, might perplex the public. Again, to find guarantors prepared to take the initial plunge was far from easy. There was no spontaneous rush, and the Commissioners for a while were rather anxious. It was February before things really began to move. Then the Subscription Committee took steps to organise a first-rate meeting in Westminster, and petitioned for signatures. The important thing was to get a good name to head the list, and who so valuable as a national figure? No one seemed more appropriate than the Duke of Wellington, whom the Prince Consort himself approached. The great man accepted.

[1] Reid volunteered his services gratuitously. Fuller was offered £800 but refused it in the hope of a larger plum later on. He was disappointed; it never materialised, nor was ever promised.

The first subscription lists were opened: the Queen and the Prince placed their names at the head for sums of £1,000 and £500 respectively. By mid-February nearly £15,000 had been raised. The Mansion House meeting at which the Lord Mayor had called for subscriptions had yielded £10,000, and a rather solemn gathering at Willis's Rooms confirmed the growing feeling of approval; perhaps the first to express a measure of official international interest. Representatives of neighbouring countries took part: M. Drouyn de Lhuys for France, the Chevalier Bunsen for Prussia; M. van de Weyer for Belgium; Mr. Lawrence for the United States. All testified to the interest which was being awakened, and the hopes which would be stimulated. The tone of the meeting was raised to a higher level than usual by speeches from Lord Brougham, who temporarily forgot his Protectionist views in order to support the scheme, and the Bishop of Oxford. Lord Morpeth presided, gracefully scattering an admired address with a selection of appropriate gems from Pope:

"For me the balm shall bleed, and amber flow,
The coral redden, and the ruby glow;
The pearly shell its lucid globe unfold,
And Phoebus warm the ripening ore to gold;
The Time shall come, when, free as seas or wind,
Unbounded Thames shall flow for all mankind,
Whole nations enter with each swelling tide,
And seas but join the regions they divide;
Earth's distant ends our glories shall behold,
And the new world launch forth to seek the old."

This tempting prospect of the consequences of Free Trade was lustily cheered. It was at any rate a beginning, and the response had quietened the more nervous organisers. Others took heart. A ladies' committee was formed by the Duchess of Sutherland to further "a design in which womanly skill and ingenuity were to be represented."[1] These, too,

[1] *1851 Commissioners' Records.*

opened their subscription list, but they do not appear to have been very fortunate in their methods; they set about canvassing tradespeople in a tactless way, indeed over zealously, and made themselves, according to one of the Commissioners, frankly unpopular. After this their activities decreased.

Cole had taken up the campaign with fervour. He had turned himself into a Public Relations Officer and his activities were endless. The Lord Mayor, for example, proposed giving a banquet to the Commissioners and civic authorities throughout the country. Who passed the word, unofficially, to the Palace? Who but Cole? Would this suggestion be acceptable to H.R.H.? in which case it should take place before the beginning of Lent.[1] The hint was again Cole's. No opportunity, however humble, was ignored by him to arouse public aid and sympathy. When a working man enclosed a shilling in a touching letter of support it was at once inserted in *The Times*, since it expressed the hope that other working families might do likewise in order to enable the object to be carried out "In a manner becoming to a great nation like ours."[2]

* * * * *

The strain of events was beginning to tell. The Prince's constitution, never robust, was showing signs of the worry which had dogged him at home and from abroad ever since the upheavals of 1848. By January, 1850, his appearance was giving such concern to the Queen that on medical advice she suggested a change of scene. Brussels, for instance, and a visit to his Uncle Leopold. To Stockmar she wrote that she "could quite bear this sacrifice" for "he *must* be set right before we go to London, or God knows how ill he may get."[3] Indeed, she attributed her own shaken nerves to his state of health.

[1] *1851 Commissioners' Records.*

[2] *Ibid.*

[3] Martin, *Life of the Prince Consort.* Vol. II, 243

But there was to be no question of a rest. At the end of January Parliament reassembled. The Queen was expecting another child—the Prince himself was overwhelmed with duties which could be delegated to no one else.

Problems arose on every side, thorny, complex, some apparently insoluble. There was the Building to be considered. Its site; its size; its capacity. The question of raising the funds which were to cover its cost. There were the views of the other States to be consulted; communications and transport to be arranged. The punctual arrival of their contributions would have to be ensured, and their allocations of space to be agreed upon and decided. Then there would be the human factors. Rivalries, jealousies; the inevitability of envy, the certainty of disappointment. There was so much to be considered, and the Prince, as these bewildering problems processed before him during those restless and sleepless nights so alarming to the Queen, appeared, on the face of it, to be the only man who had command of the subject both as a whole and in its tiresome and interminable detail.

At this stage of the proceedings rewards were few and rare. Teamwork and co-operation were blessings for which to be grateful, but there was little evidence so far of real progress, and obstacles were extraordinarily persistent and disproportionate. There were, it is true, a handful of old friends to turn to for advice. Men like Peel for support; and Stockmar for sagacity. And in Brussels there was M. Quetelet his former tutor, whose letters were both encouraging and, what was more, free from pompous pedantry. He could read romance into the adventure. "These are the tournaments of our modern times," he wrote to his discouraged pupil. "They are less poetical, perhaps, than those of ancient times, but they also have their character of grandeur . . .".

A month after the inaugural meeting at West-

minster it was the turn of the Prince Consort at last to identify himself in public with the machinery he had set in motion. The projected Mansion House banquet, whispered from ear to ear by Cole, was to become a reality; it took place on March 21, 1850.

It was a gargantuan affair. It necessitated the presence of the Chief Officers of State, the Commissioners, the Foreign Ambassadors, and the dignitaries of at least two hundred towns. It involved a *levée*; presentations; speeches. It was the official birth of a Liberal vision, the purport of which was noble, ambitious, selfless and disinterested. The Prince, who was gaining a reputation as a public speaker, was determined not to disappoint his audience on this, of all occasions. He ended by astonishing them. He spoke concisely and with vigour. He moved by his manifest idealism and absence of self-interest. Patient study of his text, committed to memory, deceived his hearers into believing him to be completely self-assured. The only person not so deceived was the Queen herself. The preparation of her husband's speeches was done so well, so carefully, she wrote to King Leopold, "that no one believes he is ever nervous—which he is."[1]

The guests, gorgeous in uniforms and robes of office began to arrive at the Mansion House at half-past five in the afternoon, in the presence of admiring crowds. At a quarter-past six Prince Albert, in the dress of an Elder Brother of Trinity House was received in state by the Lord Mayor; after which the company passed in to the Egyptian Hall the columns of which had been decorated with trophies representing counties of the three Kingdoms and the Principality of Wales. Raw materials, industry and commerce were the keynotes of the decoration; their importance was lavishly and emphatically underlined.

Perhaps it was rather too naturalistic in places.

[1] Martin. Vol. II, 250.

Among shields painted with symbols of British industry and small gutta percha models of home production, were Landseeresque groups of stuffed animals, backed with laurel. Ireland's products were displayed by pork, butter and linens. Scotland's by manufactures and agricultural devices, by wild game and plaids. Wales was represented by leeks, by goats' heads, by minerals. England by merchandise typical of her counties. At the far end of the hall, somewhere high above Prince Albert's chair were suspended Peace and Plenty, colossal figures. Opposite, Britannia leading an angelic quartette invited the world to bring along its wares. Besides these emblems a large mural revealed the ships of all nations discharging their bales in a somewhat idealised Port of London.

The monstrous meal began at seven. The collation upon the sideboard was a copious example of that prodigal age. An age when it was possible to offer baron of beef, *petits pâtés; filets de poulets; riz de veau à la St. Cloud; homard à l'Indienne, fricandeau de veau, turbans de filets lepreaux;* chickens, capons, turkey poults larded, hams and tongues ornamented; raised ornamented pies; lobster salads, prawns, Chantilly baskets, ornamented trifles, fruits, strawberry *noyeau*, Rhenish and Italian creams, Dantzig *noyeau* and Maraschino jellies; *nougât* with cream; Charlotte *à la Russe, gâteau de pomme; gâteau à la Duchesse;* apple tarts, *fanchonettes; boudin* St. Clair; raspberry, apricot and greengage *tourtes;* hunting puddings, trifles, Cabinet puddings, Nesselrode puddings and creamed tarts from the sideboard alone.[1]

The main part of the meal was a matter of course. Delicious ices concluded it, and the National Anthem brought the first part of the jollification to a close.

By this time the company was mellow indeed; well in the mood to listen attentively as their guest of honour, Prince Albert, rose to his feet.

[1] *1851 Commissioners' Records.*

His speech that night increased his reputation. He conceived the whole family of mankind united in self-help, resolved on developing the gentler arts in friendship and harmony. It was more of a symbolic vision than a Utopian dream. An artist by temperament, a student of history, a lover of philosophy; a politician only in spite of himself he cherished few illusions as to human nature, and the notion of permanent and universal peace, however desirable in itself, was about as remote a possibility even in his mind as that of universal equality.

What, it is clear, he did hope for was that the moment might seem propitious in quarters inclined to seek guidance. And who better suited to give that guidance than the one European country which had emerged unshaken from the shock of 1848?

So, as he asserted his faith in the energies of his adopted countrymen the Prince Consort pledged himself to the hilt: "Nobody," he affirmed, "who has paid any attention

> to the peculiar features of our present era, will doubt for a moment that we are living at a period of most wonderful transition which tends rapidly to accomplish that great end, to which, indeed, all history points—*the realisation of the unity of mankind.* Not a unity which breaks down the limits and levels the peculiar characteristics of the different nations of the earth, but rather a unity, the *result and product* of those very national varieties and antagonistic qualities.
>
> "The distances which separated the different nations and parts of the globe are rapidly vanishing before the achievements of modern invention, and we can traverse them with incredible ease; the languages of all nations are known, and their acquirement placed within the reach of everybody; thought is communicated with the rapidity, and even by the power, of lightning. On the other hand, *the great principle of the division of labour,* which may be called the moving power of civilisation, is being extended to all branches of science, industry and art.
>
> "Whilst formerly the greatest mental energies strove

at universal knowledge, and that knowledge was confined to few, now they are directed on specialities, and in these, again, even to the minutest points; but the knowledge acquired becomes at once the property of the community at large; for, whilst formerly discovery was wrapped in secrecy, the publicity of the present day causes that no sooner is a discovery or invention made than it is already improved upon and surpassed by competing efforts. The products of all quarters of the globe are placed at our disposal, and we have only to choose which is the best and the cheapest for our purposes, and the powers of production are intrusted to the stimulus of *competition and capital.*

"So man is approaching a more complete fulfilment of that great and sacred mission which he has to perform in this world. His reason being created after the image of God, he has to use it to discover the laws by which the Almighty governs His creation, and, by making these laws his standard of action, to conquer nature to his use, himself a divine instrument.

"Science discovers these laws of power, motion, and transformation; industry applies them to the raw matter which the earth yields us in abundance, but which becomes valuable only by knowledge. Art teaches us the immutable laws of beauty and symmetry, and gives to our productions forms in accordance to them.

"Gentlemen—the Exhibition of 1851 is to give us a true test and a living picture of the point of development at which the whole of mankind has arrived in this great task, and a new starting-point from which all nations will be able to direct their further exertions.

"I confidently hope that the first impression which the view of this vast collection will produce upon the spectator will be that of deep thankfulness to the Almighty for the blessings which he has bestowed upon us already here below; and the second, the conviction that they can only be realised in proportion to the help which we are prepared to render each other; therefore, only by peace, love, and ready assistance, not only between individuals but between the nations of the earth."[1]

It was a most successful speech; congratulations poured in from every side. Letters of every description

[1] Martin. Vol. II, 248.

and from all sources were received testifying to the clear, the comprehensive thought, the felicity of expression; the masterly compression. "I mean to keep the Report and make my Boys read and reflect upon it," wrote an admiring father;[1] while the Liverpool Peace Society presented a vote of thanks to the Prince Consort for his gesture—after centuries of military hero-worship—towards the idea of permanent peace: "We gladly and gratefully recognise—The *Hour* and the *Man*."[2]

[1] *1851 Commissioners' Records.*
[2] *Ibid.*

THE ORGANISERS OF THE GREAT EXHIBITION OF 1851

From the painting by H. W. Phillips in the Victoria and Albert Museum

Standing, L. to R. :

C. W. DILKE. J. SCOTT RUSSELL. HENRY COLE. C. FOX. JOSEPH PAXTON. LORD JOHN RUSSELL. SIR ROBERT PEEL. ROBERT STEPHENSON.

Seated, L. to R. RICHARD COBDEN. CHARLES BARRY. LORD GRANVILLE. WILLIAM CUBITT. PRINCE ALBERT. LORD DERBY.

CHAPTER IV

SUBSCRIPTIONS WERE LAGGING. IN THE PROVINCES, particularly in Manchester, it was plain to observers that support was half-hearted among the group whose active co-operation in the Exhibition was imperative: the industrial class. The Subscription Committee had visited the more important provincial centres, and the press stepped up publicity. Local committees performed their duties in this connection, but they were a patchy lot, vital in some districts, supine in others. The learned societies were appealed to, and were co-operative. The Royal Agricultural Society agreed to abandon its customary show of agricultural implements due in 1851, in order to give the Commissioners a free hand in developing this branch of the Exhibition, and its members agreed to act on the jury for awards.

But it is more than clear that throughout the early stages of organisation, however efficiently Government support was given to the idea as a whole, the practical aspect of the Exhibition, the technics of it, one might say, remained for the time an amateur affair.

Teething troubles were, of course, inevitable. For instance, an irredentist element among the council of the Society of Arts, led by a Mr. Webster, accused the Executive Committee of betraying the interests of the Society by concurring with the policy of determining the contract, and empowered a deputation to wait upon Prince Albert and ascertain his views. This, like most of the difficulties, fell upon Cole, who, taking it all in his stride, dashed off warning letters to General Grey, to Stafford Northcote, to all concerned. Then again it appeared that Herbert

Minton's name was included with those of Messrs. Osler and Apsley Pellatt as Commissioners appointed to act on behalf of the Committee of Manufacturers. So Cole, who thought of everything, felt obliged to warn Northcote that Mr. Osler "must not be brought into contact with Mr. Minton, as they have had serious disputes, and gone to law with one another under circumstances which have left a strong impression."[1] And as it also turned out that Messrs. Osler and Pellatt were rivals, it was felt that the committee would perhaps work more smoothly without the presence of the former.

Yet more serious than these minor troubles, and undermining the success of the entire project was the state of gradual confusion into which, as helpless observers began to notice, the committees were beginning to slide. The Prince was now inextricably involved with the Exhibition; the Queen uneasy. Day by day the Government was growing more anxious, more disturbed; when a sturdy prop came to their rescue in the person of Sir Robert Peel.

Peel had, some years earlier, befriended Lyon Playfair, a young scientist with a clear mind, a tactful manner and great practical ability; an enormous capacity, moreover, for attending to detail. In the past he had owed to Peel's patronage his first opportunities; now that his services were claimed they were impossible to refuse. Gratitude and conscience came to his support. He yielded to persuasion, threw up his scientific work and consented to restore order. Chaos was overtaking the committees, threatening their work along the entire industrial front; and deplorable though it may seem, this was the Prince's fault.

Playfair had first come on the scene some time in February, soon after the Commission had begun work in earnest. In fact, watching developments from a distance, he had taken it upon himself to write to

[1] *1851 Commissioners' Records.*

Peel. He was worried. He could see what was bound to be the outcome. He prophesied the ultimate disaster; total failure.

The situation had come about in a characteristic way. The Prince Consort, for all his noble aims and philosophical theories, had an unsystematic mind. Or rather, his systems when put to the test were incapable of operation. The German approach to the problem relied too much upon an intellectual solution; too little on simplicity. It was, indeed, running true to type. It tended to classify, to generalise, to postulate. He had accordingly devised a logical classification for the Exhibition which divided it into three sections:

1. The Raw Materials of Industry;
2. The Manufactures made from them;
3. The Art used to adorn them.

A logical system, indeed, but far from practical. And in their stolid and tenacious way the hard-headed British manufacturers had an inkling that it lacked the chief virtue that commended itself to them: commonsense. There was, consequently, in their view, something suspicious about the whole arrangement. The committee sensed it too, and before they knew where they were their work was leading them into complexities to which there could be no end. For when put to the test the Prince's categories were not watertight and his philosophical arrangement fell to pieces at once. It turned out to be quite impossible to separate raw materials and produce of the animal, vegetable, and mineral kingdoms from the distinct groups of manufactures and machinery at any definite stage. Iron ore was a case in point. Iron ore was the raw material for cast iron, and cast iron was the raw material for all iron industries.

Playfair had at once seen the flaw in this cumbersome process, which demanded expert knowledge from the committee members on almost every branch of manufacture throughout the world. He wrote to

Peel more as a friend than as a Commissioner. He proposed as a more workable alternative, "To constitute your committees . . . selecting from them men conversant with various branches of industry, and form them into small committees under the following divisions:

A. Metallurgy;
B. Chemical Manufactures;
C. Vitreous-ceramic Manufactures;
D. Textiles;
E. Organic Manufactures;
F. Engineering and Machinery;
G. Architecture, Fine Arts, Music;
H. Agriculture, Horticulture."[1]

It was a simple and clear-headed remedy, and Peel wrote off to the Prince, recommending Playfair as "a man of great energy and activity—I wish he were a paid member of the Executive Committee."[2] Then, on the evening of March 7, Peel called Granville out of the House of Lords and told him of his serious alarm at the manner in which the business of the Exhibition was being conducted. He thought the Commission unfit as a body for work, and suggested that Northcote and Granville themselves should undertake direction and responsibility.[3] For Reid, though able and judicious, seemed inefficient; Scott Russell a bad secretary, with a disagreeable manner and a measure of insolence in his behaviour to the committees. And on the top of it all it was being openly prophesied that the Exhibition was doomed to be a failure.

All was not well either with regard to the unfortunate contract. Here again the Commissioners were anxious. Arbitration was now requested, and two arbitrators were appointed: a Mr. Rendel for the Society of Arts, and a Mr. Tyrell for Munday's. But on meeting to consider their powers they found

1 *1851 Commissioners' Records.*
2 *Ibid.*
3 *Ibid.*

them inadequate, and in fact Rendel told Granville in private that he was never engaged in an arbitration of which he liked the appearance so little.[1] He was, for one thing, sure the Mundays were not the only parties interested in the contract, an allusion evidently to Fuller. And as for Tyrell, he had talked "very fair and finely"[2] but had given no indication of fair dealing. Demands for excessive compensation were, in fact, feared; there had been dark hints at witnesses from abroad; the sum of £50,000 was mentioned. The Mundays were plainly playing for time, and were out to delay the whole business by repudiating Peel's terms for arbitration. They ended by naming Robert Stephenson as their referee. Their honesty was at any rate assumed, and the suggestion accepted. All the same the Commissioners were agreed on one thing. The Messrs. Munday had acted most shabbily, and disgust was universal.

Throughout all these rather delicate proceedings the Commissioners turned anxiously for advice to their Nestor, Sir Robert Peel; his experience in the handling of affairs was invaluable. Hardly a step in the progress of the unfortunate contract was taken without previous consultation with him, and he corresponded directly with the Prince on the one hand, and with Granville and Labouchere on the other.

When matters were as black as they could well be he took Playfair to Buckingham Palace, and together they saw the Prince. Playfair was at once offered a post on the Executive with special facilities to attend at the Commissioners' meetings so as to keep the two bodies in touch. Hardly a tempting suggestion since, for Playfair at least, it opened up a prospect of interminable jealousies. He shrank from the thought. But the Prince, anxious to persuade him, plunged into a list of all the difficulties which beset the Commissioners, convinced that these could be overcome

[1] *1851 Commissioners' Records.*

[2] *Ibid.*

with the help of a member of the Executive in whom they had complete trust. Playfair relented, yielded, and placed himself at the disposal of the President. He accepted office on one condition: that Sir Robert Peel would permit consultation in anxious moments. "Many of these occurred," he wrote in his memoirs, "Some of them were with the large manufacturing communities which desired their own conditions, not always in the interests of the public."[1]

So much for re-organisation.

Over the matter of classification, however, things went less easily, and the Prince clung to his idea with a pertinacity which did him credit, but increased Playfair's difficulties. The situation developed into a struggle. Playfair, supported on the one hand by Peel, urged reform; the Prince, backed by the rest of his Commissioners clung obstinately to the original unsound scheme. But eventually they gave way, became convinced, and Playfair's system was accepted. It classified manufacturers into twenty-nine groups, each of which were sub-divided into sections representing distinct industries. Thus, it became possible, as the Exhibition progressed, to detect industries which were missing, and their producers were in turn informed.

This system was the first of its kind with reference to industrial work. Specialists like Charles Babbage and Dr. Whewell praised it. It was adopted by the Commissioners. But when the foreign Commissioners were approached the trouble began all over again. The French would have none of it. They liked their own system. It was also logical and philosophical. And even more involved and useless than the Prince's own. Playfair patiently argued that the best system must in the end be the workable system; the one manufacturers could most easily follow. But he was only met with sceptical smiles. He proposed a test. They should fix, he suggested, on an everyday object,

[1] T. Wemyss Reid, *Lyon Playfair. Memoirs and Correspondence.* VI, 114.

and see who could most quickly locate it by means of his respective classification. An object was chosen: the French Commissioner's massive walking-stick. The French Commissioner searched, he spent much time searching, compendiously, through his logical and philosophical system of classification. It did not help him. He had great difficulty in locating his walking-stick, the placing of which for exhibition purposes was at last identified under a sub-section entitled "Machines for the propagation of direct motion."

Playfair spotted the walking-stick immediately. Under his own system it appeared under *Miscellaneous Objects* in a sub-section, "Objects for personal use." It was as simple as that.

The French Commissioner gave in. The English classification was accepted, and was sent out to all the leading manufacturers in the United Kingdom. It resulted in a swing-back of opinion in favour of the Exhibition, cleared the minds of contributors and the prejudices of manufacturers. Altogether, it was a personal success for Playfair. Hardly had the question of the classifications been decided before he was appointed a special Commissioner with Lieut.-Colonel J. A. Lloyd, with the special function of acting as liaison between local committees and London, and was sent off to the provinces. The two were to keep in touch with all concerned, and, when the time came, to supervise the preparation for collection and transmission of articles to the Exhibition. They were to inform, to enlighten, where necessary to modify, existing arrangements. Lloyd went south, Playfair north. He contacted manufacturers, civic authorities, members of parliament. He explained, he conferred, he lectured. Throughout his travels he was careful to present all of them with the objects, nature and aims of the approaching Exhibition.

At first things were not promising. Lancashire, for example, was unco-operative and still suspicious, but

here Cobden threw in his weight and turned the scales in Playfair's favour. From Birmingham,[1] the home of three hundred separate trades, Playfair wrote telling Peel that the central Commission did not possess the confidence of the country, and that rebellion had broken out among the local committee. This he had managed to subdue, saving the Commissioner from a disagreeable vote of censure. He then went on to Scotland. At Paisley he found great discontent with the Commissioners' decision not to affix prices to their goods. Here it was felt that unless relative costs of production gave some indication, French shawls would withdraw attention from Paisley shawls. For French manufacturers were making shawls from a medium quality upward; the Paisley men from a medium quality downward. Fear of the result was paralysing Paisley. The manufacturers were on the point of deciding to send in nothing at all.

By June Playfair was reporting from the Potteries. Here, feeling, lately apathetic, was at last warming up. At Stoke upon Trent he visited Minton's factory, where "Minton will be more than worthy of himself."[2] Copeland, however, was not at work in the same methodical manner, though he was later to fill his allotted space with some excellent things both in quantity and quality. But here as elsewhere manufacturers seemed, he thought, to be misconceiving the objects of the Exhibition. They appeared to be aiming at varieties of, rather than representative production. Then there was the matter of taste. Much that was being demanded was simply execrable. An American buyer had been round Minton's showroom and had complained that his designs were not angular enough to suit the United States. It was lamentable, but there it was. In a letter to Granville,[3] Playfair suggested that any such commissions be classed "To suit

[1] *1851 Commissioners' Records.*
[2] *Ibid.*
[3] *Ibid.*

the American Market" or "The Russian Market . . . in order that we in England may escape the disgrace of such ugly monstrosities, and other nations may improve by the contrast." He went on to Macclesfield, and found the place in a fever of capriciousness. Morale had been undermined by the visit of a previous propagandist[1] who, in an apparent burst of high spirits, had gone so far as to promise the authorities a gilt-edged album bound in red and blazoning the Royal Arms, merely for the purpose of entering its subscription list. Rarely had townsmen been more deceived. The book had never arrived; worse still, it had evidently never even been intended, and the inhabitants of Macclesfield sturdily objected to subscribing their names in any album of a less impressive description. Not for nothing had Playfair been selected for tact. Distressed that donations should fall merely for lack of a red binding, he promised one by return. Spirits rose, so did subscriptions, and the book arrived in due course. And if the Royal Arms were absent from its gorgeous cover, other expectations were amply fulfilled.

His visits to Sunderland, Newcastle and Durham gave him great satisfaction. Manchester, which had swung round from its earlier suspicions, was now in the van of the supporting movement, and was anxious to display the machinery which was accumulating in an immense quantity. And Playfair fought for adequate space in which it might be displayed. On the whole, feeling in the manufacturing centres varied with the constitution of the local committees, and accurately reflected their indifference or their zeal. Stockport, for instance, had initiated meetings at which the most trusted operatives or manufacturers were allowed to work up addresses on the lines of the important speeches previously delivered on the aims and advantages of the Exhibition itself. But Wigan, with a population of some 30,000 cotton-spinners had

[1] William Hepworth Dixon.

little to show. Bolton was zealous, under an excellent mayor. So was Blackburn. But Burnley was inactive, and Bury apathetic; stirred only to temporary interest by the sudden death, that summer, of Peel. Like the rest of the cotton-spinning communities Oldham flagged; the Messrs. Platt alone seemed to atone for deficiencies. They were to exhibit at great expense to themselves the whole process of spinning a fancy waistcoat, from the raw material, through every stage, to its completion. Their machinery was described as magnificent.[1]

Sheffield caused Playfair more anxiety than any other town. Here, the local committees were constantly defeated by local jealousies, rivalries, animosities and Trades Unions. In fact, even at so late a period as the autumn of 1850, only one exhibitor had come forward, and Playfair had to be very energetic indeed to combat this hostility. It was imperative that Sheffield should give a good account of herself. The United States and Germany were making prodigious efforts to beat her in producing cutlery and edge tools. The situation was extreme; Playfair was determined to conquer it. With the help of a volunteer staff he succeeded in breaking down resistance. One by one the defences collapsed. By the end of his visit he had rounded up the seventeen great manufacturers of silver. The edge tool makers, the ornamental iron casters, and the coach-spring makers followed quickly.

It was a remarkable *volte face*. Apathy, apparently hopeless, had been suddenly converted, due to the energy of the chief magistrate and the teachers of the School of Design, both of whom had wrestled with the task. For an entire week they had brought all their efforts to bear on the problem, working for eighteen hours at a stretch in order to create a thirst among such indifferent horses. The pressure worked. Results were apparent in five days. At the end of the

[1] *1851 Commissioners' Records.*

time potential exhibitors had increased to two hundred and ninety-six, and applications had been received for thirteen thousand feet of space in the Exhibition.

So Playfair's tour continued. Visits to Sunderland, Newcastle and Durham pleased him greatly. And Colonel Lloyd was also on his rounds. He had been successful in Stockport; he had found elsewhere enthusiasm and a spirit of co-operation. But alas, for reactionary Kent: it showed a miserable, a malingering spirit. And what little of goodwill there was there had been damped by the hostility of some of the leading clergy, and the Recorder of the county, a Mr. Espinasse. Here, apparently, opposition was generated because of the agricultural and protectionist nature of the county. Led by Lord Stanhope who was supported by the gentry, the tradespeople formed themselves up in line behind their superiors. The local committees, composed of small uninfluential men, were powerless. Dover was apathetic; only roused from indifference by the glint of wealth likely to accrue to it from the expected huge influx of visitors.[1]

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At the same time, valuable as Playfair was becoming in the reorganisation of the Exhibition on the side of home production, his real achievement in the Exhibition was his organisation of the juries, consisting as they were to do, of all nationalities, and his superintendence of their awards. His correspondence with Lord Granville on this subject alone is voluminous.

There was in fact to be hardly a point connected with the constitution of juries, the preparation of their reports, and the manner in which their services were to be organised, that was not submitted by Granville to Playfair. He was in some respects indispensable. His suggestions were certainly ingenious, and that he played up to popular feeling is abundantly clear. He

[1] *1851 Commissioners' Records* (Lt.-Col. Lloyd's Report).

proposed, for instance, the constitution of a Central Jury for Appeal and Award, "as the feeling of the country is so decidedly in favour of the representative system."[1]

To the Prince Consort he outlined this plan to deal with what was by far the most difficult question confronting the Royal Commission. His method was to distribute the classes into groups, to appoint a chairman to each class, and a separate, distinguished, chairman to each group. The Chairmen of the Groups were to form a Council which revised the decisions and was a Court of Appeal. The system was easily workable. As it turned out there were few serious difficulties. Where they did develop they were due, not unnaturally, to national interests and animosities.

As a safeguard Playfair reserved for himself the right to attend the meetings both of the juries and the council, but this only in the event of disputes.

The Prince, who had lost no time in considering these suggestions, at once delivered his views. He approved the Central Jury of Appeal for the United Kingdom, but not for foreign countries where a jury of appeal would not be required, and the respective Commissioners were to undertake responsibility. As to juries of award, fairness and impartiality would be necessary and must be world-evident. Of their numbers a certain proportion were to be foreigners, in order to give other countries perfect confidence in impartiality. Such a promise had, in fact, been given. It had also been announced that no person should be placed upon such a jury who was himself an exhibitor.

So Playfair's project in principle, at least, was adopted. Each Special Jury was to elect a Chairman, and the Chairmen of the Special Juries were to associate themselves with representatives or nominees of the Royal Commission, thus forming a central council to ratify all decisions of the Special Juries.

[1] *1851 Commissioners' Records.*

By this time curiosity in other countries was awakening. It was reserved to begin with, but it was unmistakeable. Encouraging articles had already appeared and were recurring in much of the foreign press all over the world in response to the tactful yet cautious approaches of the British representatives. At a very early stage of the project, the British ambassador in Paris had, during a convenient talk over the breakfast-table at the Élysée, discussed the subject of a "Monstre" Exhibition with the Prince-President, and had been able to report[1] home that Louis-Napoleon was very much taken with the idea, and could be relied on to do all in his power to help, at least so far as France was concerned. But it was the same elsewhere. Whether in Germany, in Austria, or farther afield interest was equally and undeniably widespread.

In Germany, indeed, the idea was welcomed with warmth. In the autumn of 1849, when soundings were being taken and before the Government's official approval had been bestowed, Scott Russell in his official capacity as secretary to the Society of Arts had gone over there with letters of introduction from Lord Palmerston to all the British representatives at the various Courts of the *Zollverein*, the Prusso-Bavarian League which since 1834 had united for purposes of trade many otherwise independent German States.

In Berlin every facility had been granted him. Herr von Pommer-Esche, the under-secretary for Commerce and Trade, who had acquired considerable experience in connection with the 1844 Exposition of Arts and Industry there, complained of the very great difficulty experienced owing to inertia and jealousy among both States and manufacturers. Only by offering large inducements either by purchasing, sales of goods, or payment of transport, had the thing been set going at all. He had also found that in order

[1] *1851 Commissioners' Records :* Lord Normanby to Lt.-Col. Phipps.

to induce first-rate participation by the best manufacturers, four conditions were essential: remission of all duty on articles sent for export; payment of transport to England; adequate prizes; and permission of sale of goods on removal.[1]

From his own and his Government's standpoints Pommer-Esche considered the project for 1851 most wise, likely to prove beneficial to British enterprise, to England at large and London in particular. It was, moreover, full of promise both for Prussia as well as for Germany. At the Gewerbe Institute, Herr Wedding, its director, endorsed these views, and the Finance Minister, van der Heydt, promised all assistance in his power, in the belief that the Exhibition would benefit all countries, but especially England. From all this evidence there emerged one fact of paramount, reiterated importance: the necessity for collecting the best work by the best manufacturers; the alternative probability being inundation by a bad class of cheap goods.

So Scott Russell toured Berlin with gusto. He visited the chief sculptors in their studios and exacted some of their masterpieces as contributions. Herr Kiess promised his greatly admired Amazon; Professor Rausch another monumental work. He visited the porcelain factory; the terra-cotta factory near Charlottenburg; saw Herr Geiss's remarkable zinc castings, found the gold and silver work wretched, and finally visited Gerson's shop for a representative eye-view of what might be expected in the way of haberdashery, stuffs and carpets. Wherever he went he met with interest and co-operation. In fact, as he reported, among all the Germans he interviewed one view prevailed and one view only: the wisdom of promoting such an undertaking. It would provide stimulus to Germany, a country still backward in industrial production but growing eager to compete with its neighbours, while for Great Britain it opened

[1] Scott Russell's Report. *R. Soc. of Archives.*

up the vast prospect of trade, increased commerce and apparently unlimited prosperity.

Interest stirred, too, in gigantic Russia. Baron Brunnow, an able though occasionally obstructive diplomat, spoke for his country when he informed General Grey, in a confidential and revealing letter,[1] that liberal ideas were as prevalent in St. Petersburg as in London. Russia was anxious to submit her goods, and "You will find also", he wrote,

> "that the Minister of Finance has contemplated to entrust these objects to the care of some deputies, chosen among our merchants, Cobdens, Free-Traders, etc. Pray, let me know whether I should encourage the Minister of Finance to carry into effect his idea of sending these deputies here, or whether I ought to discountenance the project. At all events there is one suggestion of the Minister upon which I entirely agree with him, viz: that these deputies ought to be selected amongst a set of people without stars and ribbons."

Democratic ideas were, even then, not the sole prerogative of one country, or group of countries, and for the Prince Consort's taste at least, this was carrying liberalism a little too far. For in view of the possibility of one of the deputies being chosen to represent his country on one of the prize juries, it was obvious that he should be drawn from a non-competing class.

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In their own, rather peculiar category, British colonial possessions were not unnaturally expected to disgorge many wonders. Cole, alive to these possibilities, had interviewed the authorites at East India House, and had been promised a complete collection of India's natural and mechanical productions, while Dr. Royle, the botanist, had furnished a statement of the great advantages the Exhibition would bring to the raw products of India, for the collection of which he was responsible. He was insistent, for example, that as much as possible should be shown

[1] *1851 Commissioners' Records.*

together for the greatest benefit and instruction of the public. He was persuading a Fenchurch Street firm to exhibit a collection of all the kinds of tobacco imported into the United Kingdom; another was to show gelatine, glue and isinglass, while Messrs. Fortnum and Mason were to exhibit a collection of dried fruits and seeds imported by them into Britain. Other raw materials were to be specimens of indigo from China, used to colour green tea, China hemps, and Guatemala tobacco.

CHAPTER V

TIME WAS PRESSING. SINCE IT WAS CLEARLY GOING to be impossible to assess even roughly the probable number of contributors or the amount or bulk of their contributions without an increase in delay, the area of the proposed building had to be decided out of hand. The Commissioners agreed upon an arbitrary ruling of 800,000[1] square feet to fill some twenty acres, an area three or four times as large as any of the previous exhibitions held abroad. But opinions as to the site itself had, from the very beginning, differed. Now they began to oscillate with the fluctuations of a magnetic needle.

At the earliest stage of the discussions when the entire scheme had been embryonic the Government had offered the Society of Arts the use of the courtyard at Somerset House, where, in 1837, the earliest School of Design had been set up by the Board of Trade. But this courtyard which would have accommodated a limited display was soon discarded as inadequate, an area unworthy of consideration, and the Prince had for a brief moment reviewed the possibility of Leicester Square with its open, undeveloped neighbourhood; central enough indeed, but in a state of abandonment and neglect. But this proposal Cole will be remembered as having scouted in favour of his own, his nobler conception. For to his mind no site would be adequate short of Hyde Park itself, the garden of London, the show-ground after his heart. The Prince had listened to his arguments, had asked him to survey a site unlikely to interfere with the needs of the military, and this Cole had lost no time in

[1] Later increased to over 1,000,000 square feet.

doing. On the morning after their second meeting, a Sunday,[1] he had taken his wife and children across the Park after church, had inspected various sites, and decided on the strip of ground stretching from Albert Gate to Prince's Gate,[2] and lying between the Serpentine and the Cavalry Barracks at Knightsbridge. The next day he had drawn up and handed in his report on the subject to the Prince at Buckingham Palace, and the Prince had approved and agreed. But the choice, like many others so obvious as almost to defy criticism was far from settled, as the Building Committee soon had occasion to discover.

This committee had been set up to investigate specialised subjects connected with the Exhibition. Its members were the Duke of Buccleuch; Lord Ellesmere; Charles Barry; William Cubitt; Robert Stephenson and that monarch of engineering, Isambard Kingdom Brunel. There were also C. R. Cockerell, designer of the Taylorian and completer of the Fitzwilliam Museum; and the authority and writer on architecture, C. L. Donaldson. So that besides the two Commissioners it was composed of three architects and three civil engineers.

They met together for the first time on February 5, 1850. Within six months they had held their thirty-eighth session. This was an unfortunate committee: its members felt their problems strongly. They were not to be always in complete agreement, but then nothing connected with such a complex structure was likely to be easily settled. They began, however, by considering the site. Many came up for review and discussion. There were other candidates beside Hyde Park, and their pretensions were given a fair hearing. By some it was feared that Hyde Park would be too central, and that congestion of traffic would create bottlenecks at Knightsbridge and in Park Lane; that access would be obstructed, and goods awkward

[1] July 1, 1849.

[2] Now Prince of Wales' Gate.

to handle if remote from centres of transport. That, in a word, Hyde Park was far from ideal. Alternative sites were suggested; Regent's Park was considered preferable by some members on account of its proximity to the railway centres handling the largest amount of British manufactures, and to the Regent's and Grand Junction Canals which would convey foreign contributions. But Battersea Park came up for discussion. So did Victoria Park, Primrose Hill, Wormwood Scrubbs, and even, by a stroke of romantic imagination, the Isle of Dogs.

Still, having unsuccessfully examined alternatives the Building Committee returned to the original suggestion sponsored by the Prince Consort. They finally recommended Hyde Park as the site most suitable to the Commissioners. For here at least, the Crown's permission had already been obtained; here, too, were twenty acres with a flat surface, sixteen of which the Committee advised should be set apart for the actual building. Having decided this fundamental point, they invited the public to submit designs, "suggestions by public competition as to the general arrangement of the ground plan of the Building"; and on March 13, this invitation was published at home and abroad. It applied to the public as a whole. None was excluded. Professional architects and amateur designers were to contribute ideas. They were, it is true, allowed less than a month in which to give them expression: April 8 was the somewhat brief time limit. But competitors were undeterred, and by the date of expiry, they had done themselves justice. Two hundred and thirty-three submissions had been received, twelve stragglers following later.

It was an energetic response to a rather vague invitation. In all, two hundred and forty-five plans, elevations and designs were received by the Building Committee.[1] They discussed their merits in a report.

[1] Which later exhibited them to the public at the Institute of Civil Engineers.

Two lists were drawn up: one category entitling competitors to "favourable and honourable mention"; the second to "further higher honorary distinction."

But of the two hundred and forty-five hopes thus raised not one was crowned. Seventy received honourable mentions, from among which a further eighteen qualified for the ambiguous category of meritorious distinction. Two alone were selected for special praise: the designs of M. Hector Horeau, a Paris architect, and of the Messrs. Turner of Dublin. These were found to evince "most daring and ingenious disposition and construction." But they were the sole concessions. The Building Committee would have none of them. Having themselves invited the contributions they now sat back and rejected the lot. They then declared themselves: they came out with a design of their own. If their action was unaccountable, they did their utmost to justify it. They believed that they could improve on the efforts of the unlucky competitors.

They had, at least, learnt what to avoid: not to arrange stalls longitudinally, both on account of inconvenient length, if intersected by only a few divisions; and of the consequent confusion if intersected by many. Then they ruled out as impracticable all plans based on radiating systems, as likely to crowd the public in counter-currents, and they dismissed architectural designs as too monumental and costly. Plans for quartering the building into four distinct exhibitions would tend to mar the general effect as well as to quadruple the supervising staff; and there were other types considered more or less unsuitable.

These lessons had all been borne in mind when the Building Committee had set to work. They were determined to profit by the experience of the unlucky two hundred and forty-five: they were convinced that they knew how not build, and even though the architects quarrelled among themselves or, jointly, clashed with the engineers, still they had given the

matter a great deal of anxious thought. They now went out of their way, in the report which they presented to the Commissioners, to explain their own ideas on the subject. Their salient points were finally embodied in the plan they issued themselves, recommending "some striking features to exemplify the present state of the science of construction in this country." It was placed under the joint supervision of Digby Wyatt, who had been transferred from the Executive to the Building Committee, Owen Jones, the architect and designer eventually responsible for the interior decoration of the Crystal Palace, and C. H. Wild, responsible for the engineering.

Alas, for the Commissioners. They were, before long, to regret their little architectural spree. It did nothing to enhance their prestige, or, for that matter, to increase faith in their competence. Between them they had evolved a structure of brick so peculiar in aspect and so unsuitable in character that even now, in imagination its appearance defies description. Low, long and unlovely this monster, partly a child of the great Brunel himself, was to consist of 19 million bricks, was to be four times as long as Westminster Abbey, and to contain a hall of sculpture crowned by the "striking feature" : an enormous cupola, 200 feet high and slightly exceeding in diameter that of St. Peter's at Rome. In fact the whole design resembled nothing less than a sprawling congeries of railway sheds crushed down by a single vast observatory.

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But throughout this laborious and frustrating period the committee's hands had not been helped by the attitude of Parliament. In March Lord Brougham, whose vagaries were becoming unpredictable, having originally caused astonishment and relief by supporting the project of the Exhibition as a whole, now suddenly decided to champion the Protectionists, and attacked the policy of the Commissioners in the House

of Lords. Having spoken in favour of the Exhibition at the Westminster meeting, he attempted to strangle it altogether by leading the Opposition on the question of the site. He objected to the choice of Hyde Park. He objected in principle from a sincere wish to protect one of the lungs of the capital from being choked by a huge building: a tubercle, he called it. He was confident that there would be a flocking of the nations of all countries with their wares and inventions either to Hyde Park, or Green Park, or into any other park or place in which—and here lay the sting—a depository was to be provided by the voluntary contributions of his countrymen. In fact he made a thoroughly mischievous speech. The debate was allowed to drop. Not so the ideas implanted.

But no sooner had Lord Brougham spoken his mind than the Commissioners had to reckon with a new and equally tiresome opponent in the House of Commons—the die-hard member for Lincoln: Colonel Charles de Laet Waldo Sibthorp, a truculent figure with a fierce little beard and an accusing spy-glass, who has in a way now come to personify the very spirit of opposition to all that the promoters of 1851 were so earnestly, so ardently striving to inspire. For he clung obstinately, stubbornly and classically to all that was good and bad in the delectable past. He had attacked railways, Reform and Catholic Emancipation. He now stormed Free Trade in this its latest and most odious stronghold, and since he was a clever and positive speaker, he had, at least from the Commissioners' point of view, decided nuisance value.

Ostensibly his grievance was over the elms in Hyde Park. There was a clump of these: ten of which stood right in the line of the ground to be occupied by the Exhibition building. They had therefore been daubed with whitewash by the authorities for cutting down in order to make room for operations.

Colonel Sibthorp was solicitous for these trees, any

one of which furnished a good enough stick with which to belabour the Exhibition. As opposition strengthened he stood up in the House and moved for a return of the number to be cut down in Hyde Park in order to clear the site. That very day he had himself visited the Park, and having seen the clump of ten elms so marked, he desired to know whether there was really an intention to cut them down in the Park which was the property of the people? Still more, he wanted to know for what they were to be cut down? He would tell the House. For one of the greatest humbugs, frauds and absurdities ever known: the intended Exposition of 1851. The government in fact were about to be guilty of demolishing public property of the most valuable kind, and all for the purpose of encouraging foreigners who would only laugh at the English for their folly. He should support the Exposition were it in his opinion to be for the public good; he would do nothing to encourage foreigners.

The Protectionists were on the march; public opinion began to veer. Round like a weathercock swung *The Times*, which now began to predict that the whole of Hyde Park and Kensington Gardens would become the bivouac of all the vagabonds in London. The late coronation scenes, disgraceful and disreputable spectacles enough, would certainly be re-enacted, but instead of lasting for days would endure for months.

Then there would be the unspeakable annoyance inflicted on the neighbourhood; the victimisation of the inhabitants of Kensington Gore, Park Lane and the princely mansions on the Bayswater side, to say nothing of the inconvenience to horsemen who needed the facilities of Rotten Row for their daily exercise; all of these would be driven to seek some humbler district.

There were plenty of residents to support this view. A strong-minded old lady, Mrs. George Villiers,

living at Old Kent House in Knightsbridge, was most sensitive to the proposed arrangements, and passed a whole year of apprehension, since, opposite the Barracks she was right in the front line of attack. In her voluminous correspondence alarm loomed almost as large as the shadow of the dreaded Bazaar itself.[1] "I have given a shilling and shall hold my purse strings very tight," she wrote to her son,

> "Hyde Park will be spoiled, the children will not be able to walk there, the trees will be cut down and all sorts of horrors will take place. If Prince Albert wants to indulge fancies, let him and his courtiers pay for them or the Grandees of the land. But to send the begging-bowl round to poor clerks and to be told the Queen will be much displeased if people dont subscribe—I think it is too bad."

So did many other householders fringing the Park: the prospect was fearful. Most solemnly *The Times* warned the Prince Consort of the effects that would result from the association of his name with a scheme of such unpopularity.

At the height of the controversy the Commissioners thought fit to publish their precious design. They could scarcely have timed it more unfortunately. Here was fresh ammunition for the Opposition: a building, not a temporary affair at all, but a solid, substantial edifice, was being thrust upon them. An edifice of brick and iron and stone, calculated to withstand the wear and tear of a century. A building as concrete as Buckingham Palace, topped by a dome considerably larger than that of St. Paul's. A building which would have cost every penny of £100,000, and would in addition need a furnace house with boilers, tall chimneys and all the gear for generating steam. It would be Wolverhampton and Greenwich Fair rolled into one. Had the Prince's advisers gone off their heads? They were entreated to pause in their mad scheme, and reflect before it was too late.

[1] *Nineteenth-Century Commentary*. By Marjorie Villiers. Quarterly, 1944.

Everything seemed to be going wrong. The storm had broken. Letters of protest, and quantities of well-intentioned suggestions flooded the papers. Attacks in Parliament were constant and unsparing, and to make things worse the manufacturing districts took fright. A proposed change of site filled them with distrust and misgiving ; Hyde Park suited them well.

COLONEL SIBTHORP.

By courtesy of the Proprietors of *Punch*.

Then the inhabitants of the threatened neighbourhood presented a petition to Parliament complaining of the cutting down of the trees, and prayed that the House would not permit Hyde Park to be destroyed by the erection of enormous buildings.

Colonel Sibthorp rubbed his hands.

But events, infinitely worse than these, were on the way.

On the morning of June 29, Sir Robert Peel had a long interview with Lyon Playfair on matters connected with the Exhibition. At mid-day he was

present at a meeting of the Commissioners, advising them over the delicate situation which had arisen over the general outcry against the use of Hyde Park. A few hours later, riding home past the garden wall of Buckingham Palace, he was thrown from his horse and was taken home seriously injured.

Four days later he was dead, and the Exhibition had lost one of its best and most influential supporters.

It was almost a death-blow. The moment thus far was the most critical of any. For the question whether or not the use of Hyde Park was to be sanctioned by the Government was to be made the subject of a debate in Parliament on July 4, and the Commissioners had decided to throw in their hands if the site should be withdrawn on the day building was due to begin.

Prince Albert, seized by a mood of black despair, unburdened himself bitterly and dejectedly to Stockmar. The microcosm he had so carefully built up during the past twelve months, was on the point of collapsing upon his patient shoulders. That very week the Queen had been struck over the head by a half-crazed officer; Peel was dead; the site was threatened; the approaching debate of which he was to have taken charge in the Lower House now lay bare to the attacks of Sibthorp: "It is to come to the vote tomorrow," he wrote, "and the public is inflamed by the newspapers to madness."[1]

Indeed this was only too true, and *The Times* was leading the charge. It placed itself at the head of public opinion, and with a series of resounding slogans bore down upon the unhappy instigator of the whole affair. The Exhibition and its sponsors were becoming a public nuisance, and had better pack off somewhere else—preferably to the Isle of Dogs. The Prince gave way to utter pessimism; "Peel", he continued to Stockmar, "was to have taken the lead in our defence, but now there is no

[1]Martin. Vol. II, 290.

one with influence enough to procure a hearing for justice and reason. If we are beaten we shall have to give the whole thing up."

The loss of Peel was undoubtedly a great personal blow to Prince Albert; one of the few public men who understood his reserved nature, and with whom he had been on terms of relative intimacy.

Yet even in what appeared to be the hour of defeat, the Prince's methodical mind continued to attend to innumerable details which in a weaker character would have been neglected. He thought of everything; he forgot nothing. He asked Lord Seymour at the Office of Woods about the possibility of finding a temporary ride in Kensington Gardens to compensate the frustrated horsemen of Hyde Park. He was not put off, either, by Lord Seymour's rather curt refusal on grounds of economy and unfitness of soil. He took the matter up with Lord John Russell: "I am sorry", he wrote,[1]

> "that Ld. Seymour's scruples prevented your mentioning the riding in Kensington Gardens in yesterday's debate, as it would have had a powerful effect. Lord Seymour's objection to the softness of the soil will not hold good for May, June and July, the months during which the riding would take place, and as to the hurdling, the Office of Woods must have quantities in store. If not, however, they are quickly and cheaply procured, and could even be hired for a couple of months. There is a quantity of wattle hurdles in St. James's Park, which ought, on grounds of economy, one day to be changed for iron hurdles, and I am sure will be so. Could the iron hurdles not be used first for Kensington, and then transferred to St. James's?
>
> "I hope you will ask Ld. Palmerston to say a few words in debate on the Communications with Foreign Governments, and the disappointment they would justly feel at the overthrow of the Exhibition at the 11th hour."

It was clearly going to be impossible to defeat so pertinacious a man as this; a man who even when the

[1] *1851 Commissioners' Records.*

outlook was blackest could adhere so faithfully to the smallest details of his plan.

* * * * *

The debate was drawing nearer. On July 1 the Commissioners had presented the House of Commons with a Memorandum justifying their choice of the site. They agreed that London, being the capital, was from the beginning to have been the venue of the Exhibition. That the most easily accessible and central site was clearly necessary, had been demanded by the provinces, and was expected by the visitors. That Hyde Park had been proposed in October, 1849, but that the question had come up again after the issue of the Commission and that the Crown's permission had been obtained.

It was pointed out that the Commissioners having widely circulated the nature of the Exhibition at home and abroad in a published document which stated that the Queen had been "graciously pleased to grant a site for the purpose on the south side of Hyde Park, lying between the Kensington Drive and the ride commonly called Rotten Row", all subsequent action had been taken with reference to this formal announcement. Specifications had been prepared, and *bonâ fide* tenders expected. Drainage and water supply had been provided for. All bore reference to the particular site in question, and would be unsuitable to any other.

But the tardy attention paid to the whole matter having caused them to reconsider their selection they had proceeded to examine and discuss all over again the respective merits of the north-east section of Hyde Park, refused by the Department of Woods and Forests on various considerations of national importance; the north-west portion of Regent's Park, on which building was prevented on account of existing leaseholds; Battersea Park which was unsuitable on a number of counts, and Victoria Park

which was inaccessible to the public and inconvenient to the local inhabitants. Commoners' rights would interfere with building at Wormwood Scrubbs; Primrose Hill had no level space, and finally the Isle of Dogs was objectionable, unsuitable and damp. To add to all their arguments the Commissioners observed that in any case matters had now gone too far to admit of alterations; that any change of site must inevitably result in postponement for another year, and they could not ignore the fact that postponement of the Exhibition would inevitably lead to its total abandonment. Abandonment, with £64,000 already subscribed, two hundred and forty local committees in being throughout the kingdom, and the working classes subscribing funds out of their wages all over the country so as to be able to come up to London and see a spectacle to which they had been looking forward for months. Abandonment; with twenty-three foreign states already committed as participants. With the Russian Government shortly shipping their own exhibits ahead of time so as to forestall their arctic winter and ice-bound ports, and the Austrian Government postponing its own Exposition which had also been planned for 1851, so as not to clash.

As to the colonies, it was foreseen that such irritation would arise that none of them would ever wish to take part again, should postponement be necessary.

So far the arguments were sound. But toward the end of their Memorandum[1] the Commissioners had to face the question of duration of occupation. They had found themselves confronted with charges of putting up an expensive solid building of "brick and other durable materials" and they tried to justify it on penny wise and pound foolish lines. They hedged all round. They intended the building, they said, to remain the property of the contractors. As to the dome, they felt that might be omitted altogether, and referred vaguely to " cheaper sort of covering".

[1] *1851 Commissioners' Records.*

They were, in fact, desperately worried. For although in certain directions they could feel morally strengthened—the Westminster and Marylebone committees were presenting petitions to Parliament in favour of Hyde Park—they could hardly feel at ease as to the outcome of the approaching debate. There were, it is true, a few friends upon whom they might rely, but they had not the faintest idea what was to happen if they were defeated, or gained only a narrow victory. They had held strong language; were they to climb meekly down and try for another site? And then, if it came to abandoning the whole enterprise? The difficulties of winding up would be incalculable.

Again, if they were defeated then the House would be to blame. The Building Committee were adamant on one thing: there could be no change of site. They refused even to consider the possibility of any other.

The Commissioners were at bay. They faced a country led by *The Times*, and, whipped on by Colonel Sibthorp, a pack of newspapers in full cry. From where was salvation to come? For come it did, and from the most unexpected quarter.

* * * * *

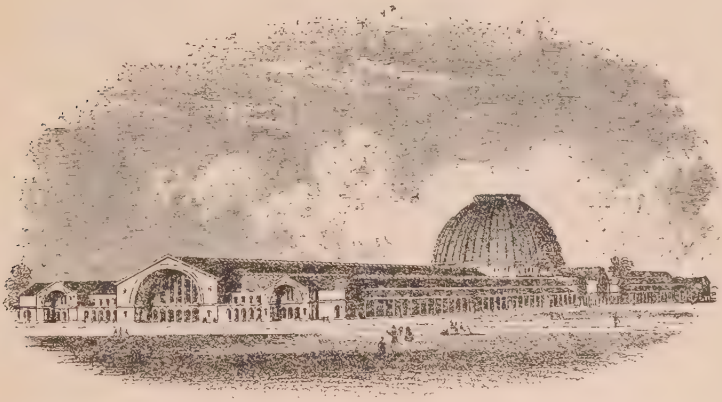
Spirits were at zero when the debate and division took place on July 4, and suddenly, the unbelievable happened. The House was still reacting to the powerful impression caused by Peel's death two days earlier. Lord John Russell spoke briefly on the melancholy event. Then, partly, no doubt, owing to respect for his memory, partly, perhaps, from the awareness that he was no longer present to influence members; partly, too, to that feeling of loyalty which surges up in circumstances tense with emotion and particularly affects Anglo-Saxon reserve; whatever the reason, feeling had swung round, as it might have seemed, overnight.

Colonel Sibthorp and Sir Benjamin Hall brought

forward their motion, but with little effect. Almost unanimously feeling had altered. Quite suddenly all parties seemed to find Hyde Park the most suitable place after all in which to hold an International Exhibition.

Both debate and division were clearly in favour of the Commissioners. Hall was defeated by a majority of 119, Sibthorp by 120. In fact the Opposition were defeated by a very large majority, and although Lord Brougham carried on the attack in the House of Lords, his motion was eventually withdrawn.

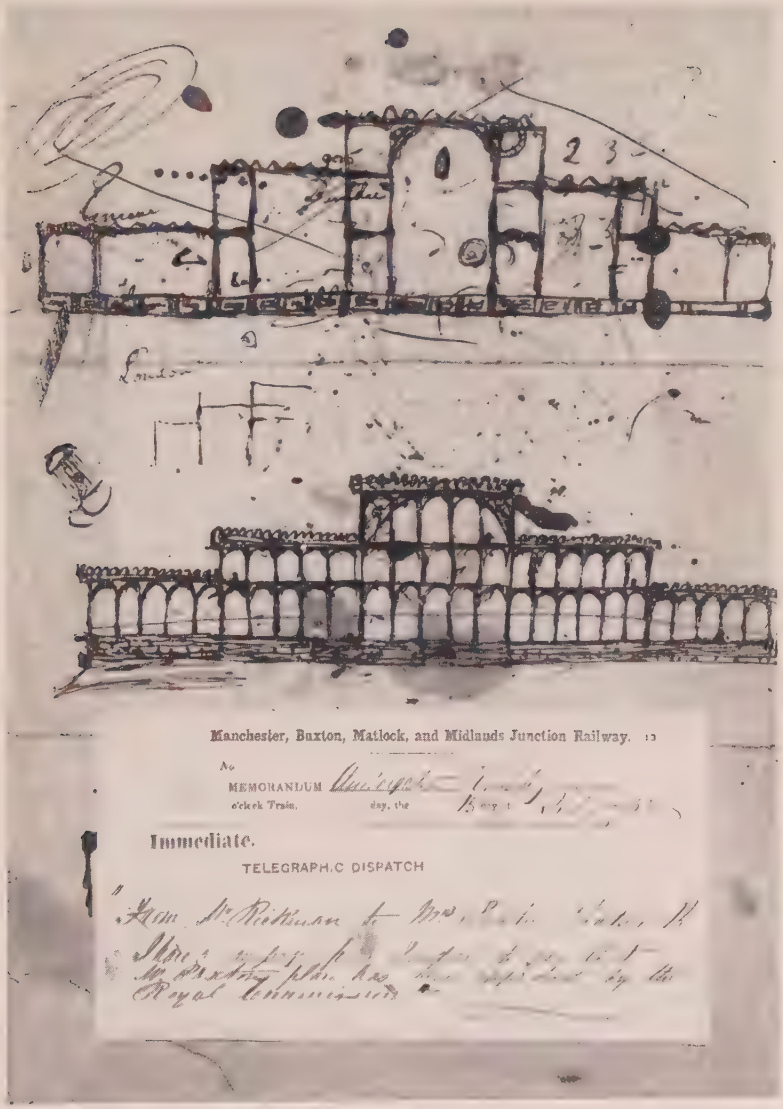
While these events had been taking place, the Building Committee, still clinging to their unpopular



THE COMMISSIONERS' DESIGN.

design, had been going ahead with their plans for putting it into execution, and had invited tenders for the work to be put in hand. Nineteen of these were eventually received, but none fell below the £100,000 agreed on by the Commission; economies were plainly desirable. Subscriptions fell still far short of their requirements, and this uncertainty intensified their fears. Dismayed, they began to make some belated modifications. By scraping and paring away at their plan, they attempted to make it fit into the

estimated framework. First they omitted, no doubt with a sigh of relief, their unregretted dome; after this followed the disappearance of other superfluous accessories. They thus saved some £13,000, but their building was now beginning to look more than ever extraordinary.



Victoria and Albert Museum

SKETCH OF THE CRYSTAL PALACE ON BLOTTING PAPER

With Paxton's message to his wife announcing the Commissioners' approval of his design

PART II

THE CRYSTAL PALACE

"The quantity of bodily industry which that Crystal Palace expresses is very great. So far it is good.

"The quantity of thought it expresses is, I suppose, a single and very admirable thought of Sir Joseph Paxton's, probably not a bit brighter than thousands of thoughts which pass through his active and intelligent brain every hour—that it might be possible to build a greenhouse larger than ever greenhouse was built before. This thought, and some very ordinary algebra, are as much as all that glass can represent of human intellect."

RUSKIN: *Stones of Venice.*

". . . it was neither crystal nor a palace. It was a bazaar, admirably constructed for its purpose, and justly surprising those who beheld its interior."

LEIGH HUNT: *The Old Court Suburb.*

CHAPTER VI

THE COURSE OF THE EXHIBITION, WHICH UP TO THE present has flowed along, turbulently enough at times, has so far been confined to metropolitan, or orthodox channels. That is to say it has been the affair of learned societies, commissioners, governments and official bodies as such. It is now seen to turn abruptly northward, and for a time almost to disappear from view. It is an anxious moment at which to leave it; with the Commissioners wringing their hands in London as they anticipate the worst of the approaching debate, and the Building Committee arguing over the estimates for their plan, undecided whether or not to accept the tenders that have been received, or to wait still longer until more shall have been examined. The reader must have patience, and must abandon these scenes of wrangling and despair in order to set out upon a journey by train to Derbyshire. For it is there, among the wild romantic landscape that surrounds Chatsworth that the fate of the Great Exhibition is to be decided.

And here, looking out across his terraces, sustained by magnificence in a manner that recalls the splendid patronage of the Renaissance, is seen that gifted, generous and fastidious figure, William George Spencer Cavendish, sixth Duke of Devonshire.

Solitary, neurasthenic, surrounded by aesthetic perfection yet scourged by deafness into increasing seclusion, he had found his chief enjoyment in those collections of coins, books, paintings and statuary brought home from his continental travels. But his dominating interest, lately grown to an absorbing passion, was horticulture: to his gardens alone a

fortune had been devoted. Yet the rarer plants, the arboreta, the climbers and the cascades had not always been sources of such interest. Chiswick House, a chance inheritance, had been the fortuitous cause; its large grounds bordered on those of the Horticultural Society. It became a habit with the Duke to take a short cut across their gardens; habit developed into interest; interest to pleasure. The unusual plants, the vivid creepers, the exotic blooms of sub-tropical origin roused his curiosity. Sometimes, too, the gates were opened at his approach by one of the under gardeners; a shortish young man of striking intelligence, with whom to talk of gardens, plants and flowers was a quite exceptional enjoyment, and whose knowledge, as well, was already so vast.

In this romantic fashion a career began; providence making one of those mysterious movements by means of which the direction of a life is sometimes completely changed. Struck by the intelligence and ability of the alert young man the Duke offered him a sudden vacancy. Thus, while still only twenty- three, Joseph Paxton became head gardener at Chatsworth.

These events had taken place in 1826. Like others of his generation Paxton turned out a reformer in his own line of business. Gardens and conservatories were his ruling passion; with these went ideas for designing, adapting, enlargement and construction. And if his talents lay in the direction of engineering rather than of architecture, the forcing houses at Chatsworth which he set out to improve were ideal as media for his genius at improvisation.

He had begun in a limited way, dissatisfied with the existing greenhouses which, with their coarse, opaque glass and heavy woodwork, were dark and inadequate to his purpose.

By 1828 he had been experimenting in lighter sash-bars, and aiming at a corresponding increase of sunshine. Next had come the lessons of the lily-house, where, spreading immensely, the giant *Victoria Regia*

had outgrown her tank so rapidly as to necessitate improvisations on the classic theme. He had begun to use cast-iron columns; larger glass, which, in order to avoid overlapping, he imported from the continent by the sheet, designing his roofs on the ridge-and-furrow principle, and arranging them on a level instead of on the usual inclination found in the more conventional type of greenhouse.

Then, in 1837, had come the great conservatory at Chatsworth, where, by a grooving-machine connected with a steam-engine, Paxton succeeded in perfecting the sash-bar—a system which had earned him the medal of the Society of Arts. From that time on he had increased in experience, had accordingly prospered, had become the Duke's close and confidential friend, accompanied him abroad, enlarged his own mind, and was now a man of affairs.

By 1850 he had acquired a number of other interests, and influential friends from one end of the country to the other. He had for some time past been following developments for the Great Exhibition of Art and Industry to be held in the following year, and was in London at the beginning of June, shortly after the publication of the Building Committee's design for their own projected mausoleum. He paid a visit to Barry's new House of Commons with a member, Mr. Ellis, chairman of the Midland Railway, and heard the unsatisfactory acoustics while it was being tested for sound. Paxton observed that he feared another mistake was about to be made over the Exhibition Building; he volunteered a few ideas of his own. Mr. Ellis listened, then took him straight off to Lord Granville at the Board of Trade. It now appeared that owing to a possible loophole in the new specifications a fresh clause covering late submissions might be admitted even at this hour. Paxton requested its insertion, following which he guaranteed to produce complete plans of his own within the next ten days. He then left London. The Executive

Committee were dumbfounded and incredulous, but Cole, as usual, was ready for new ideas. That week-end Paxton was present at the floating of part of the Britannia Bridge over the Menai Straits. On the following Tuesday[1] he was back at Derby attending a committee meeting of the Midland Railway. At this meeting he was credited with lack of attention, for throughout the session he appeared to have lost interest in the matter under discussion, and spent the time scribbling on the blotting-pad in front of him. At the end he held it up for his colleagues to admire: the outline of the Crystal Palace, coarsely sketched, was already in existence.

Within ten days of his original proposal he sent in his designs which had meanwhile been drawn to scale by his staff at Chatsworth. They were shown first to the Building Committee, then to the Commissioners themselves. Scott Russell had passed them to Peel who had given them his immediate and, as it turned out, his dying blessing. But the Building Committee, still intent upon the adoption of their own plan, would have none of them. They were thoroughly unwelcome.

It was certainly an extraordinary plan. So simple, so clear, so obvious, once the principle of construction was explained, as to defy criticism.

Paxton had simply produced a vast replica of the new *Victoria Regia* lily-house at Chatsworth, and it answered three main requirements. It was suitable for housing an Exhibition; could be adapted to the proposed site; might be indefinitely used either as a winter garden or a vast horticultural structure, or might come in handy later on for future exhibitions. It required neither stones, nor bricks, nor mortar. It was composed of dry material ready at once to house exhibits: iron, wood and glass were to be its only components. It could be taken down as easily as it could be put up, and as easily extended, reduced

[1] June 11, 1850.

or increased in size, since its parts were, like children's miniature engineering toys, interchangeable.

It was, in fact, to be a giant specimen of ferro-vitreous prefabrication, a flash of insight into the future. Yet this idea of a glass house was not the first to have been suggested. It had come up already in December, 1849, when Thomas Page, a civil engineer who had designed part of the Thames Embankment, and later constructed the Chelsea suspension and Westminster bridges, had written to Colonel Phipps expressing surprise at a passage in the Indenture: ". . . that the materials of the Building should be the Property of the Contractors on the termination of the Exhibition." "Why", he had suggested, "should the Building not be so constructed that it could be taken down and refixed at any other place or at any other time? Such a structure with supports and arched ribs of cast iron covered with glass where that material would be required . . . would be the least expensive—most indicative of the industrial pursuits of the nation."[1]

Mr. Page's suggestion appears to have been ignored; regarded no doubt as that of a crank, and shelved accordingly. But the situation had passed the stage of urgency, and had become suddenly desperate. It could wait no longer upon official indecision.

Finding the attitude of the Building Committee to be both cold and suspicious, Paxton turned to another quarter for approval. He published his design for the Exhibition Building in the pages of the *Illustrated London News*[2] and appealed, rather dramatically, to the verdict of the nation.

So far, the Building Committee had only received three tenders: nothing was settled. At the end of June Cole had set off for Birmingham, Manchester and Liverpool to invite others, if possible below the high figures of those already received. Comparisons are

[1] *1851 Commissioners' Records.*

[2] July 6, 1850.

interesting. At Birmingham he interviewed the firm of Fox and Henderson, contractors for naval and other works, and they tendered as follows:

For the Building Committee's plan—

£141,000 for use only;
£168,000 if for purchase.

For Paxton's plan, £89,950, subsequently offering to carry it out for the Committee for £79,800, plus £6,000 for transepts. They only required payment of 40 per cent. during the period of construction; the balance to be settled at a later date with interest at 5 per cent., and the contractors undertook to have the building ready by January 1, 1851.

There was no getting away from the fact that the discrepancy between the estimate for the Commissioners' plan and that for Paxton's design was an obvious argument in favour of the latter. Still, the Building Committee seemed to hope against hope that their own would be adopted: it was only after this that they had begun paring away at their dome, but there were graver considerations underlying the whole, and as the Commissioners themselves were well aware, the real problem was going to be how to raise enough money to finance even Paxton's plan. For subscriptions were still far below the sum needed for the building. Hitherto they had covered the Commission's rather modest needs: merely those of salaries for officers, printing and advertising costs, and various other small items. After all, this was only a Commission of Inquiry. It had no powers at all to enter into a contract; still less to sign one. The question now began to be asked, who *was* to sign the contract? What individual responsibility would the signatories incur? And how was the money to be provided which would be required beyond the existing subscription funds?

This situation had been foreseen some months before, when Lord Granville had suggested a guarantee fund for which he personally would be

prepared to subscribe £5,000. Since then nothing had been done; once again matters had not yet at that time assumed those critical dimensions which justified urgent action. Now, guarantees were suddenly called for, and were desperately needed. But just as the Commissioners were to meet and discuss the matter, drama once again intervened.

On July 12, in Great George Street, a member of the Finance Committee, Samuel Morton Peto,[1] came out of his office and inquired of Henry Cole who happened to be passing his door about the progress of the guarantee. Cole replied that it was not getting on at all; for no one had had the courage to begin. Peto thereupon took Cole along with him to the Reform Club, sat down and wrote off to General Grey, stating his willingness to guarantee £50,000. Although not making it a condition, he recommended the adoption of Paxton's plan.

By July 15 the worst was over. Granville had been able to set the Prince Consort's mind at ease over the guarantee fund. £108,000 had already been raised, and a further £50,000 accounted for between Brunel, Stephenson and others. After that the going had been easy. The fund had grown rapidly, and the money was found by the Bank of England on the security of the signatures.[2] Over these there was still some haggling which, for personal or private reasons debarred the adding of certain names. Thus, Baring preferred not to be included among the important signatories; "Rothschild declined guaranteeing a farthing, on the ground that the government have betrayed the Jew Question."[3]

But these were in no way serious deterrents. And on the day Lord Granville saw the Prince, the Commissioners dropped the Building Committee's plan

[1] The contractor.

[2] All told, the Bank of England advanced £32,500 ; repaid with interest three weeks after the opening of the Exhibition and solely out of receipts at the doors.

[3] Granville, *1851 Commissioners' Records.*

for good. It is hardly to be understood how they can ever have entertained any hopes of its success at all. Fox had all along expressed doubts of being able to construct it in time. For it would have required 13,000,000 bricks, and 3,000 cubic yards of water in the dome would have needed to evaporate. The glass, of a special type, could not have been both annealed and cut in time, and so the objections had gone on. Meanwhile the Committee had received a greatly reduced tender, which may have accounted for their hesitation before they finally decided on Paxton's plan. For this Fox and Henderson tendered at £79,800.

After this there had been no looking back.

* * * * *

Colonel Sibthorp meanwhile, in spite of defeat, had been not at all inclined to drop the matter of the site. He had addressed a somewhat noisy House on July 12, and had been understood to say that he believed the general impression in the country was that there never had been a greater humbug, greater fraud or greater injustice than this proposed Exhibition of 1851. He had heard on good authority that at least £240,000 would be needed to meet the expenses. Who would have to pay this enormous sum? The foreigner? He had no money. The working classes who were saving up their pence to come up to London next year? And who was to look after their families during the time? He called upon the people to petition the Queen in a general address to the Throne, praying her, before it was too late, to stop a plan subversive of all regard for the true interests of the people.

He was still not without a powerful ally. *The Times* was on his side. Dissatisfied with what it considered to be an unlucky vote in the recent debate, that formidable newspaper, in common with Colonel Sibthorp, refused to accept defeat. It referred three days later

to the newly established "Committee for the Protection of Hyde Park", composed of local residents who had taken Counsel's opinion as to the rights of their position, and were prepared to take proceedings in order to stop the Exhibition from being held in Hyde Park. Application to this end had, in fact, been made to the Attorney-General, Sir John Romilly. The case hung on Counsel's belief that the Commissioners of Woods and Forests had exceeded their powers in granting permission in the first instance, and that in so doing they had contemplated a gross and direct violation of public rights. For, granted the building being of a temporary nature, there was no knowing but that this particular form of aggression might well become a precedent for future, constant and continual aggressions of a similar character.

The Times, too, was ironical about Mr. Paxton's monstrous greenhouse and the specious arguments supported in its advantage: arguments which it promptly set out to demolish. The flat glass roof would leak in every direction; the heat in such a monster conservatory would be intense; the exhibits would receive inadequate protection; finally, the cost would be rising £100,000 which, with the prize money, would total £120,000, while receipts would result in a deficit of £35,000.[1] "Our calculations", it continued superbly, "may be depended on . . . we shall shortly know the result of the deliberations of the Committee, and be enabled to inform the public whether a huge conservatory of glass and metal, or a mighty and substantial warehouse of mason's work is to be erected in our Park."

Know them they did. And things were not all going the way *The Times* could have wished. The threatened injunction turned out largely to be the result of wishful thinking. The *Morning Chronicle* rushed to defend the Park and the Prince. Sir John

[1] *The Times* calculated on £60,000 subscribed, and £25,000 from estimated receipts.

Romilly meanwhile refused to sign the application for the injunction, and his grounds for refusal were based on his opinion that he was the best judge of the public interest. He referred to the recent vote in the House of Commons as expressive of what was best for the inhabitants of London; altogether, "a more arrogant specimen of legal jesuitry it would", said *The Times* furiously, "be difficult to imagine."

There was another Parliamentary struggle on July 26, when Hyde Park was again debated in both Houses, and in which Lord Brougham made a violent attack upon the Attorney-General, and was answered with much point by Lords Lansdowne and Grey; and Colonel Sibthorp prayed that the Queen would sanction an injunction to restrain the erection of any buildings in any part of Hyde Park for the intended Exhibition. For Hyde Park was now to be devoted to purposes which he must hold to be prejudicial to the people in a moral, religious, and social point of view. An exhibition of the trumpery and trash of foreign countries, to the detriment of our own already too much oppressed manufacturers. The promoters of this project, having got into a scrape, were flying in the face of the rights of the public merely to gratify the foreigner, who had no rights to be here at all.

As it was, Romilly defended himself by a lengthy and able justification of his actions, and the measure collapsed.

On the same day, after full investigations, the Commissioners met, and definitely adopted Paxton's building. In its initial stages he had devised it long, straight and level; a parallelogram running east to west, with an additional projection on its north-western side.

The entire area was then sub-divided into twelve avenues running lengthwise with the building, of varying widths and formed by rows of 8-inch hollow cast-iron columns 24 feet apart, and in turn supporting the galleries.

The main avenue, the Nave, formed a grand parade which ran straight down the building from east to west. Here it was at its broadest. On either side of it ran narrower aisles but of the same height; beyond which came 48-foot aisles but with a ceiling reduced to 43 feet. The remaining aisles were proportionately lower, and separate tiers of columns supported the roof at its different levels.

This, then, was in principle Paxton's idea.[1] And though subsequently modified, enlarged and altered it was this that the Commissioners, on first accepting Fox and Henderson's tender to construct a glass building for £79,800, proposed to adopt.

But before the contract could be signed, before, indeed, the work could be put in hand at all, there came to the front a fresh difficulty, and unforeseen.

It concerned the matter of the Park trees: the surviving elms, which earlier in the year had been the cause of such violent feelings. They stood right across the site, the last of a clump of ten which terminated exactly at a spot facing Prince's Gate.

It had been at the end of February that Lord Carlisle, then Commissioner of Woods and Forests, had acceded to the request of the Commissioners and had agreed to remove the offending clump. But either the process had been slow, or the workmen tardy. Before the trees had all been cut down Lord Carlisle had been replaced by Lord Seymour. And Lord Seymour was a man of a very different stamp. He made difficulties. Difficulties at first with regard to the granting of temporary riding facilities in Kensington Gardens, and now difficulties with regard to the trees. The Commissioners had not yet obtained formal possession of the site, and Lord Seymour now imposed it as a condition that, until they should have done so, no more trees were to be cut down without special sanction from the Queen.

[1] His original measurements were slightly different; to avoid confusion those mentioned throughout are quoted from the official report.

So delay succeeded delay. And matters were not improved by Lord Granville's awareness that Lord Brougham had been going about confidentially informing important foreigners that the whole affair was doomed and would shortly be "knocked on the head".[1] He had even gone so far as to state this to the President of the Paris Chamber of Commerce, M. Legentil, who had become thoroughly alarmed, and had to be satisfied with Granville's patient assurances that the general position was sound, progress definite throughout the country, and that he need believe nothing of Brougham's crazy behaviour: "I think him", he wrote, "very near madness at times."[2]

The one valid argument to be used against Paxton's design was the continued presence of these trees, to the removal of which Lord Seymour now refused his consent. It was at this juncture that the Transept began to take shape. Over this subject hovers an interrogation mark: a mark of uncertainty, for both Paxton and Barry appear to have claimed the original idea. To Barry it is, indeed, generally ascribed; but we have against this the text of a speech[3] made at Derby by Paxton when he publicly referred to his idea of covering the Transept and enclosing the trees with a semi-cylindrical roof, declaring that the measurements of the trees had been brought to him by Brunel.

Playfair on his side had considered the matter with the Prince Consort; he too refers to Paxton's idea of enclosing the trees. There had even arisen a question of some doubt over the possibility whether this feat of engineering might not kill the trees altogether. This had sent Playfair off to Turnham Green to consult Dr. Lindley, the botanist, and his return the same evening to the Palace with encouraging news to

[1] *1851 Commissioners' Records.*
[2] *Ibid.*
[3] *Ibid.*

the contrary had been reassuring. The important decision was taken: the trees remained. They contributed, in the event, to the exhibits themselves; they became the Exhibition's most distinguishing feature. But for the time being, the arboreal battle was on; Sibthorp's elm, the smallest and meanest, being the centre of hostilities.

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In any case by now the Building Committee were at daggers drawn.[1] The engineers were bitterly accusing the architects; the architects, in turn, the engineers. Paxton was complaining of being sacrificed by them all in their mutual anxiety to destroy one another. And although everyone seems to have agreed that the vaulting would improve the appearance of the building, and although Fox and Henderson stuck to their guns, saying that they were prepared to execute the contract within the stipulated period, while admitting the possibility of delay arising from bad weather, the engineers for their part declared that they would be unable to complete the work by the agreed time. The Transept was the chief cause of the trouble, and when the Building Committee met to consider various aspects of Paxton's plan, they were confronted by serious doubts which had arisen in the minds of some of them as to the probability of its being completed by January, 1851. Granville in a letter to Phipps[2] refers anxiously to the disturbing situation:

> "Cubitt, Stephenson, Brunel and Paxton are very much against the semi-circular elevation suggested by Barry and quasi-approved by the Committee."

Then on July 26 the Building Committee had reported to the Commissioners. With Paxton's concurrence they had recommended a modified version

[1] So much so that Dilke and Cole had been warned by Reid not to be present at their disputes.

[2] *1851 Commissioners' Records*, dated July 22, 1850.

of his first plan, leaving, as the only alternative upon which the Commissioners were to decide, the question whether or not should be added the longitudinal vaulted roof.

In fact, Cubitt, while admitting the additional beauty of Barry's plan, disbelieved, along with the other engineers, the contractors' optimistic estimate as to the date of completion, and threatened to withdraw from the Committee if the Commissioners were in its favour.

Fox undertook to complete the structure on time, even allowing for the greater difficulties of contracting for the vaulted roof. He even was prepared to incur the penalty for not finishing it.

Paxton thought the plan with vaulting unquestionably the more beautiful of the two, but that for Barry's drawing, which allowed for an additional 10 feet to support the vault, another £10,000 would be involved. That without these 10 feet the vault would be disproportionate and even more objectionable than his own original level design. But he was prepared to answer for the final completion of this, as he was for its security when finished: he would not consider himself responsible for the other.

Then Barry himself, believing the elegance or deformity of the entire building depended on the shape of the roof, threatened to withdraw if the Committee decided against his vaulted Transept, claiming as he did so that the additional expense would involve at the most £5,500 and not, as Paxton had suggested, as much as £10,000.

The patient Commissioners heard their arguments; then begged them all to leave the room. Members were free to express their opinions. The Prince preferred the vault, provided that it could be raised in time, but wished the Commission to decide without further reference to Osborne. With the exception of Sir Richard Westmacott, opinion was unanimous. Barry's roof was preferred, but that in view of the

doubt expressed by the three engineers, Colonel Reid and Joseph Paxton as to the possibility of execution in time, of security and of additional expense, they adopted the safer plan.

Barry, much mortified, behaved very well, and did not formally withdraw. Cubitt and Reid were responsible to the Woods and Forests for carrying out the direction of the building. But the Commissioners were still not in a position to agree to a contract founded upon the approved plan, and Mr. Fox was now informed that they were about to apply for a Charter of Incorporation which the Government would grant. After receiving this they would agree to a contract. Fox was warned that if he began operations in the meantime he would be doing so at his own risk. Nevertheless, chafing at the time already squandered, he decided to begin at once.

On July 30 the Commissioners took possession of the site and enclosed it with a hoarding. By the beginning of August the contractors were at work; the "Destruction of Hyde Park" had begun.

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All these proceedings have been explained at some length because the struggle for the Transept—like the struggle for the trees—seems inseparably bound up with the determination which had by now begun to possess each opposing side.

Paxton's design had for the moment triumphed, but since subsequent modifications and alterations, including the addition of the Transept eventually increased the outlay, this might be a convenient moment in which to describe the general plan.

Hitherto it has been referred to as the Building. It now begins to be alluded to in public as "The Crystal Palace", a name invented, it appears, by *Punch*.

It was really no less than an immensely magnified version of the lily-house at Chatsworth, intersected at

the dead centre of its aisle by the vast Transept, 108 feet high, with its curvilinear roof thrown over to protect the elms at the northern entrance and being constructed solely of iron, glass and wood, without the use of any moist materials like plaster or mortar, to create unnecessary condensation.

As to the scheme of construction, it was really to be of the simplest imaginable; simple enough to be breath-taking. The cast-iron columns, of which 3,300 were needed to support the whole building, were cut into different lengths, 19 feet for the lower, 17 for the upper tiers connected by 3-foot sockets so designed as to support the horizontal gallery girders at the same time. These columns all had separate bases variable in length according to the requirement of site levels. Girders constructed partly of cast and partly of wrought-iron, were, save for four in the Transept, identical in size, and formed a lattice-work combining strength and grace. Paxton, it may be observed, had drawn profit from his intelligent observation of natural engineering. His study of the structure of the *Victoria Regia* lily's umbrella leaf had led him to some interesting conclusions. Nature had provided it with longitudinal and transverse girders and supports, and these he had borrowed himself in designing the Crystal Palace. Therefore his own cast-iron girders were each 24 feet long, 2,150 in number; and the 372 roof trusses were longer.

The lower tier of girders were also the gallery floor supports, 24 feet long and running lengthwise down the building, two a side, and continuing round the ends of the Transept. These were connected by cross-galleries, covering an area of 217,000 square feet.

These galleries were reached by ten double staircases of 8 foot flights. And the upper tier of girders and trusses supported the roof, which, with its light and graceful appearance, was the grand feature of the building. It was flat, but its surface was like that of a concertina: on a ridge-and-furrow principle of

equal proportions. Twenty-four miles of gutters ran transversely to the main longitudinal trusses on which they reposed. In the intervening space the glass of the roof was supported by light wood beams, which conducted into the main gutter both the rainwater above and the condensation beneath the glass roof itself.

The grooved sash-bars of light wood sloped upward between the rafters, and received the glass panes; British sheet glass cut to Paxton's special order in 4-foot lengths. The material was ordered on a Brobdignagian scale. 205 miles of sash-bars were needed; 900,000 feet of glass, weighing some 400 tons.

The floors of the galleries required 1,128 intermediate beams to support them over the large openings of the aisles, while their frontage was supported by cast-iron girders.

With regard to the flooring, Paxton had once again been ingenious. He had found the way round many obstacles as a result of his persistent experiments with horticultural glass-houses. Stone was unsuitable for various reasons, chiefly on account of its retention of moisture. Dust accumulated and would not easily be removed. The same objection applied to close boards. Finally, a system occurred to him which appeared to solve the difficulty. Wooden paths of trellised boarding composed of 9-inch boards 1½ inches thick were laid half an inch apart on sleeper joists placed 4 feet apart; so that the dust could then be swept through the gaps, before which the boards were to be sprinkled with water from a movable hand-engine "immediately followed by a sweeping machine consisting of many brooms fixed to an apparatus on light wheels and drawn by a shaft."[1] By this means the destructive effect of dust upon the exhibits could be minimised, the boards easily dried, the surface pleasant to walk on, and the whole

[1] *1851 Commissioners' Records:* "Origins of the Crystal Palace", by Joseph Paxton.

economical. Ventilation was a problem only to be solved by trial and error, and as work advanced the necessity for pure air in a building crammed with tens of thousands at a time would begin to be more and more pressing. It was eventually obtained by metal louvres at the top of each tier right round the building, and all round the ground floor, where it formed, as it were, a 4-foot plinth.

The lighting was bound to be strong; on a sunny day possibly unbearable. Paxton's remedy for this was to cover the entire south elevation and the whole of its angled roof with canvas, so as to allow the passage of a current of air between the fabric and the glass roof. And in very hot weather water was to be poured on to cool the temperature inside. Eventually, temperatures were recorded each day during the Exhibition and a chart published in the report of the Commissioners.

All sorts of devices were in fact employed by Paxton's fertile mind for the greater enjoyment, convenience and ease of the expected visitors. Thus the side galleries were to be considered as the places from which the best views would be obtained both of the show itself as well as of the visitors, and magnifying glasses on swivels were to be provided to increase pleasure and appreciation of the scene.

There seemed in fact to be no limits to the possibilities of buildings of this nature; Paxton was already looking ahead, beyond the close of the Exhibition, to a time when the Crystal Palace might be converted into a winter garden, a permanent affair, where carriage drives and rides would be made to run through it, leaving at least two miles of galleries and ground-floor walks for pedestrians, beside some space for plants. Shrubs and climbers, for instance, from sub-tropical regions would be admirably displayed. Altogether, there was no end to the future for glass houses. In a paper he read to the Society of Arts on the origins of the Crystal Palace, he predicted the

wholesale adoption of glass as applied to dwelling houses, sitting-rooms, waiting-rooms, omnibus-rooms; he was working on a design for a private house covered entirely in glass at that very time. Glass was cheap and so was iron:[1] there was no reason why it should not eventually be used for all sorts of needs, for manufacturing purposes, for agricultural and horticultural buildings. In fact, the application of cast-iron and glass knew no limits to its possibilities. But Paxton's glass-mania almost amounted to an obsession.

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The charter needed by the Commissioners for authorising the commencement of the building was not exactly easy to obtain. There is a Gilbertian flavour about the process—as indeed there is about the whole story—the steps of which, it could be thought, might have involved less effort. For first a petition required presentation to the Queen in Council, who ordered it to be referred to the Board of Trade and to the Law Officers. It was then signed by the Queen in a second warrant; and then a further warrant was made out at the Home Office, once again receiving the Royal signature. Next, a Bill was drawn up by the Attorney-General; again signed by the Queen, the patent then passing under the Privy Seal, and lastly under the Great Seal.

The Charter thus laboriously acquired was received by August 15, and the Commissioners were thereunder incorporated. Thus legally constituted they were now able to proceed with their responsibilities, could contract for a Building, and were in a position to draw on the Bank of England for such sums as they might need on the personal guarantee of certain individual members of the Commission, and other well-wishers.

[1] Iron as a medium for industrial architecture was, however, no novelty by this time; progressive manufacturers had gradually begun to adopt it in their factories and warehouses since the beginning of the century.

They signed the contract with Fox and Henderson at the end of October, and on November 14 they bound themselves by deed of covenant with the Crown to remove the building and restore the site intact to the Commissioner for Woods and Forests before June 1, 1852.

Entire supervision of the works was undertaken by William Cubitt, chairman of the distraught Building Committee, and under him were appointed to act the same three who had originally drawn up the Commissioners' plan: Digby Wyatt for the general building construction, contract fulfilments, extras and accounts; Wild for the engineering side; Owen Jones was to be responsible for interior decoration; there were a clerk of the works, and a surveyor.

CHAPTER VII

ON SEPTEMBER 27 COLONEL REID WAS AT LAST ABLE to announce that work on the Crystal Palace had begun. He wrote immediately to inform Colonel Phipps:

> "The first of the Iron columns was erected yesterday and 18 or 20 will be up tonight. Two ribs which are to surmount the tall elms are finished. The iron columns stand upon *concrete*, instead of being placed on timber; and these concrete foundations go down to the gravel, the clay or soft mould being first dug out. Thus the iron columns will stand on firm foundations."[1]

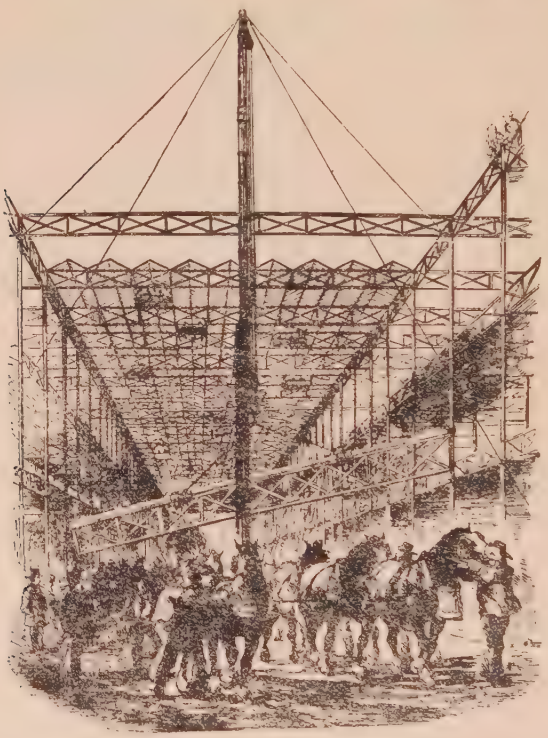
Colonel Reid, of whose activities we have had so far little evidence, now suddenly steps forward in a more positive rôle. For some months past apparently quiescent, he now expresses his policy; the value of his appointment begins to be clear. Peel had gone so far as to say he was inefficient. But this he was not. Quiet, determined and methodical, he decided that an unprecedented undertaking like the approaching industrial exhibition could only be certain of success if the simplest organisation were adopted and completed before the time for practice arrived.

With a characteristic service touch his method was now seen to assign to everyone his post; himself as commander aiding and supporting each one as needed. He organised eight departments, each in the care of a responsible or zealous committee member. Thus Dr. Royle was to take charge of raw materials; juries to be under Playfair; the building under Dilke; manufactures under Cole; fine arts under Owen Jones, and so forth. These were to be

[1] *1851 Commissioners' Records.*

responsible, as well, for the sub-divisions of their respective sections.

Early in November the Prince Consort was shown round the building by Messrs. Fox and Henderson themselves, and was accompanied by various departmental chiefs. There was much to be seen, admired,



Raising the Girders of the Central Aisle.

By courtesy of the Proprietors of the *Illustrated London News*.

appreciated. Strange devices were in operation; the mysterious handling of masses of material. There was the great hydraulic press which tested the girders by a 22-ton pressure; and there was the amazingly rapid erection of several girders and columns to behold. The Prince examined the gutters and their ingenious

formation. Their fixing and the construction of the roof itself were fascinating operations to the inventor of a sewage system, who, although an amateur, was well able to share in the mysteries of engineering. And if little was so far visible in the way of completion, enough of the structure was in position for a powerful impression to be received. A cumulative effect was obtained from the east end of the nave, when, looking down the interminable line of columns rising on either hand of the central aisle spanned by their 72-foot girders, it was realised that along whichever direction the eye travelled, it was satisfied by a perfectly straight and even avenue of columns.[1]

It was a breath-taking sight. It impressed a visitor deeply by its vast dimensions even at such an early stage. "When I came out of the entrance," Lord Granville had written after a previous inspection, "I found myself wondering at the narrowness of the High Road."[2]

The Prince saw everything. With that astonishing capacity for personal attention which is such a marked characteristic of Royalty, he patiently inspected the machinery in all its interminable detail. Examining the mechanism for punching and drilling ironwork; for boring innumerable sashbars; for sawing to standard lengths and angles; for painting and puttying, and for cutting the tongues for the ploughed joints of the external wood-facing; in short he was shown the intricacies of countless modern engineering devices, all of which he discussed, inquired after, cross-questioned and congratulated. After praising the contractors for their extraordinary speed he took his leave and his visit was at an end.

As he left, somewhere within the zone of operations a bell rang, and two thousand workmen slithered down the scaffolding, raced across the ground and formed up in a crescent round his carriage. There

[1] Separated by exact multiples of 12, into distances of 24, 48 or 72 feet.

[2] *1851 Commissioners' Records.*

is warmth in the picture, set as it is in its strong Victorian frame, heightened by the sense of period. It is a scene we know; one easily revived by reason of its familiar context: the misty park, the leafless boughs, the fading day, the sad finality of the season, the greying Serpentine beyond. While in the foreground, stark and cold, rises the clean, ferro-vitreous anatomy, thrusting itself insistently upon its contemporaries like an unwelcome prediction.

Then the royal carriage departs from the site. There are more cheers. Loud for the Prince; redoubled for a new arrival, as a brewer's dray laden with beer for the workmen turns suddenly in at the gates.

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After this, visiting the Building became the fashion. Applications were so heavy that the contractors, swamped by a wave of unsolicited correspondents, felt at last obliged to issue tickets of admission at 5/- a head in order to check the demand for sight-seeing, and the proceeds were then allotted to the workmen's fund; a distribution which worked out rather in the nature of a profit-sharing bonus. The men were well paid; few accidents had supervened.

In time the pressure of even these restricted visitors became an embarrassment. From his temporary office covered with glass and canvas, a foretaste[1] of what was to be expected from the finished structure, Mr. Fox peered out upon the crowded scene and determined to put a stop to the nuisance, close the Building and exclude all visitors. But this was not so easy. He wished to make exceptions. He wanted to continue admitting his friends. There were, too, those who, like the Duke of Devonshire, were taking an almost proprietary interest in the whole proceeding. This was hardly a matter for surprise. Was he to be

[1] Granville had already commented on the delightful light in this temporary office: "We shall all soon give up the privilege of throwing stones, and live in glass houses for the rest of our lives." *1851 Commissioners' Records.*

excluded? Or was he to be exempt? It was a situation requiring the opinion of Lord Granville.

A becoming gravity is one of the outstanding characteristics of the promoters of 1851. If an impression is received of earnestness, of bustle and cheerful concentration among the Executive, between the Commissioners hardly a smile is exchanged, while among the committees there is many a frown. From the Prince Consort down to the humblest contributor, the prevailing atmosphere is one of anxiety, intensity, and suppressed excitement: a gritting of teeth, an admirable determination to succeed. Among the entire company of officials, organisers, promoters, contractors and members of committees, only one is ever seen to betray the ghost of a sense of humour. Henry Cole can see his dearest scheme in one aspect only: a matter of life and death. The Prince bestows on it the laborious thought and judgment which are characteristic of his nature, and this, with a seasoning among the humbler ranks, of rivalry, is the prevailing mood. There is one exception. There is a smile: the smile is on the face of Lord Granville. It is a kind and rather indulgent smile, a little sceptical, perhaps, with a hint of that lazy tolerance which combined so curiously with a scrupulous addiction to duty. Nevertheless it is there, and his quiet ironical wit illuminates the human aspect of the proceedings. He holds together the strings of the organisation; he is in touch with all the committees, and his letters to General Grey, to the Commissioners, and to members of the government, in his innocent, untidy handwriting, allow full play to a quiet and irrepressible imp which peeps out from a corner of each page of his correspondence.

Not that Lord Granville was at any time something less than a stickler for etiquette. Cole, whose impetuosity needed and received a constant reining-in from that balanced judgment, accuses him, perhaps understandably, of an excessive love of formality. It

is true, of course, that Granville, in all things *grand seigneur*, respected authority in its various forms. He felt hierarchically. He now made a special point of this when considering applications to view the building.[1] Not even the Duke of Devonshire was entitled to take for granted his exceptional claim in this respect, much as he might have considered himself exempt from the rule. But it is "Puss" Granville's particular form of humour, purring, laconic, dry, and occasionally with just a hint of the scratch enclosed in the velvet paw that enlivens the tenser atmosphere of endeavour:

> "If any exception is to be made for the Duke of Devonshire it could only be as Paxton & Co."[2]

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The rush of visitors to view the operations in Hyde Park did little more than confirm official expectations. Hitherto the Commissioners had had relatively slight evidence upon which to calculate the probable attendance of the public at the Exhibition itself. But by October they were holding themselves in readiness for the onrush of uncounted crowds at home, and of at least a million foreigners. By November they were nervously applying to the Home Office for a thousand men to swell the Metropolitan Police, a step which had been foreseen if only on account of the obvious increase to their normal duties.

The Commissioners had already appointed Alexander Redgrave of the Home Office to co-operate with Colonel Reid in the business of organising the incursion into London of the masses, and the Chief Commissioner of Police, Richard Mayne, approached the Home Secretary, Sir George Grey, to this effect. But while admitting the necessity in principle, the Home Office refused to incur any financial obligation

[1] Cole declared that he even went so far as to ask permission to bring his own nieces.

[2] *1851 Commissioners' Records.*

whatever. A great deal of consultation resulted eventually in the usual compromise. Redgrave recommended the use of selected guides for the public, and for "keeping the police as much out of sight as possible,"[1] And Reid, in a sensible letter to Sir George Grey, proposed the swearing-in of numerous British attendants in charge of the property of exhibitors, while discouraging the adoption of any methods savouring of the military. The chief thing, it was generally agreed, was the maintenance of good order and regularity, without the appearance of any ostensible precautions.

The function of the guides would be the meeting of trains, the direction of the travellers to their appointed quarters, and the conducting of parties to Hyde Park and other public places so as not to overcrowd the Exhibition at any one time; to stagger crowds, in fact, by dispersal to other public exhibitions. Thus, by good organisation, and by providing the visitors with continuous distraction and diversion it was hoped to keep them under management without too much difficulty. The guides were to be recruited from superannuated Police, Military and Naval Pensioners who were expected to be very well adapted for their unexpected duties, and would not require such a high rate of pay.

Curiously enough, of those among whom the crowd phobia appeared to have taken hold most strongly was the old Duke of Wellington, who was unaccountably infected by the prevailing fear. He is described as feeling "quite violently"[2] about the dangers to which the Exhibition would expose the ordinary public, and as openly advocating the use of 15,000 men for keeping order.

Reid, however, having made his plans, advised that large bodies of police should be kept in reserve ready to be sent at once to key points wherever trouble

[1] *1851 Commissioners' Records.*

[2] *Ibid.*

might break out. It was felt that this was more likely to occur at places remote from the scene of the Exhibition, and Redgrave in a graphic report[1] proposed this solution to the problem of keeping the artisan visitors from mischief while protecting them from being fleeced. The guides were to be attached to each railway station, wearing a distinguishing badge. Their duties would be to conduct bewildered visitors to registered lodging-houses only. They would thus reduce the work of the police, of which they were to be accounted lay members, and they would be a brake upon the activities of the aimless crowds who were certain to create nuisances during the time when they were not at the Exhibition.

He suggested, moreover, that the Commissioners might profitably use their influence to secure an extension of the regulations for visiting the National Collections and public places in London, for by gratifying curiosity they would reduce opportunities for moral dereliction, and of the innocent provincials "being led into some of the hundred amusements which will tempt the stranger in London, calculated to excite rather than improve, to debase instead of elevate."[2]

In the end Mayne's estimate was adhered to, and the Government agreed to provide the extra police force, the Commissioners being required to find two-thirds of the additional costs.[3]

The railway companies with London termini had been invited to co-operate in one general scheme for fixing the number, arrivals and departures of trains, and to agree upon inclusive charges for return tickets with admission to the Exhibition during a given period. A register of approved lodging-houses, issued under official sanction, was also opened, but since nobody seems to have known what to charge, few

[1] Social Condition of London. *First Report of the Commissioners.* App. XXIV.

[2] *Ibid.*

[3] £6,000 had been estimated.

applied to have their names inserted, and for the time being speculators were at work hiring houses in every direction to lodge artless foreigners, and their example was followed in due course over lodgings for the artisans.

That attempts to cater for the influx of operatives at reasonable charges were made, can be seen from the various arrangements which now began to be announced in the press. One of these was the *Mechanics' Home for 1851*, to accommodate one thousand persons at 1/3d a night, providing each with a bedstead, "good wool mattress, sheets, blankets and coverlid, with soap, towels and every convenience for ablution." Boots were cleaned at 1d. the pair; a barber was in attendance. A culinary department offered meals which to-day would put the average hotel to the blush, with its reference to soups and cold meats, pork sausages and bacon, potatoes, pickles, salads and fruit pies; its tea, coffee, hot wheaten and oaten bread; its butter, cheese and eggs for breakfast. A news-room supplied reading-matter; a smoking-room a Band of Music to entertain the guests over their ale and porter between the hours of 8 and 9 p.m. And a complaints book lay open in the hall.

The railways, too, expected a busy season. A season of profit, according to Lord Granville. Indeed, the Commissioners were not finding it any more easy to persuade railway companies than landladies to fit in with their idealistic plans. Granville had thrown himself wholeheartedly into the business. Every aspect relating to the Exhibition's success was a point of honour with him. Obstructive tactics were natural yet deeply to be deplored. "The Railway Companies," he had complained to Phipps on October 8,

> "while professing to co-operate with the Royal Commissioners, appear to be intent on their own profits. They propose to reduce the fares only as the season advances—the first Excursion trains paying one fare for the double

journey. This will, however, have the advantage of preventing overcrowding at first."[1]

With an enchanting irony—"I hear", he continued, "of plans to have daily services in St. Paul's, and hope that too strenuous efforts will not be made to convert all our foreign visitors."

It is a brand of humour of a special mark, subtle, tolerant, no doubt sceptical. But in thorough keeping with the spirit of 1851.

As for the foreign visitors, these were expected to provide some difficulties. The division of sheep from goats was expected to prove delicate and unpopular as a procedure, unlikely to be aided by much national linguistic ability. At one moment Colonel Lloyd came forward and proposed himself as a candidate for the self-appointed post of Commissioners' Representative for the Protection of the Lower Classes. That he should have fancied himself and his capacities for the post is perhaps natural. He was very intelligent and zealous, according to Lord Granville. He spoke both French and Spanish: in his own opinion his knowledge of psychology qualified him for the post of universal uncle to whom harassed Frenchmen, Spaniards, or other foreigners for that matter might apply for protection or redress. Even this suggestion did not altogether deceive Granville. Very intelligent and zealous, Colonel Lloyd might be; he was also "a little over-anxious *de faire parler de lui.*"[2] A comment as crushing as it is convincing.

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During the past year the preparations for the Exhibition had been followed abroad with mounting interest. The opposition to the project had left foreigners in a state of bewilderment; it was an attitude they were entirely unable to comprehend. And although for some weeks past several communi-

[1] *1851 Commissioners' Records.*

[2] *Ibid.*

cations from foreign governments had been allowed to pile up on the desks of the Commissioners, this was mainly because a number of queries raised by them were still unsettled. The Foreign Committee of Ministers and Consuls were to have their first meeting in October, but were awaiting official permission for foreigners to visit places of special interest: Woolwich, Pentonville, and the dockyards.

In the meantime details had begun to shape themselves as to the probable nature of foreign contributions, and their consequent demands for space. Thus the King of Sweden, was forwarding a collection of iron manufactures; Turkey had sent a list of her Commissioners; Austria, Saxony, Berlin, Poland, Switzerland, Persia, Lima and Valparaiso had all, one way or another committed themselves to the expanding project. The Tuscan Commission was in excellent heart. Its Government announced its intention to take charge of all the goods dispatched, and to watch over them "*con la diligenza propria del buon padre di famiglia.*" More than any other, perhaps, the Tuscan Government had struck the appropriate note.

Allotment of space was a source of some anxiety. Foreign countries and their exhibitors had stipulated for a definite amount of cubic feet which could only be decided upon after careful deliberation. Since British exhibits were to occupy half the building, the other half would have to accommodate the rest of the civilised world, with its consequent claims, disproportionate alike as to quality, quantity, and economic importance.

It had to be patiently explained to foreign representatives, for instance, that their allotted space represented only horizontal or floor space; that some wall space would be available, although the amount available for the time being was almost impossible to estimate.

Collection, selection and display of exhibits was to

be left to their own discretion under the general supervision of the Executive Committee. Thus, under the existing arrangement, France was allotted 50,000 square feet; the United States 40,000; Austria 22,000; Belgium 15,000, and so on. But even these proportions were by no means final, since some countries declined their full allocation while others applied for increased space.

Then again, vexing problems had a way of arising that made nonsense of the Prince Consort's classification system, at this time still in operation. It was, for example, quite unforeseen that Switzerland would require so much space. She was in fact developing an outstanding interest in the Exhibition, and was applying for an allocation disproportionate both to her geographical size and industrial strength. Among hides, leathers, silks and cottons, she was anxious to display cheeses. And it turned out that cheeses were going to raise problems out of proportion to their value. In the first place the Committee were undecided under which category cheese was to be placed. It fitted in neither as a vegetable nor under agricultural machinery, from which it was repudiated by Philip Pusey, who declared it to raise considerable difficulties. To begin with, English farmers had not been notified about cheeses, and therefore would not be exhibiting. Secondly, how were they to be preserved? Then it was considered that being Swiss cheeses they were probably manufactured by some unusual process—the product of sheep or goats—in which case it might be possible to admit them under such a special heading. The intending exhibitors had approached the Committee to inquire whether their cheeses might not be placed in cellars for preservation; whether the proprietors might be allowed to withdraw deteriorating specimens; if not, whether the survey of cheeses might be completed within the first two or three months? As against this the Committee could not but feel that the argument for durability

was inoperative in the case of cheeses which stood well; Parmesan was a case in point. Finally it was decided that parties were to withdraw cheeses at their own discretion.

But such examples were merely practical difficulties. They could be solved either by logic or by that invariable English life-preserver, commonsense. There were other obstacles; imponderables, arising out of the almost unbridgeable gulf between national mentalities and traditional points of view. This is made clear in a letter from the British representative in China, who, desperate at the lack of enthusiasm among the Chinese officials who seemed sunk in apathy, had requested the Imperial Commissioner to stir them up. He had received in reply a communication which made his Western enthusiasm appear, possibly, a little childish:

> "The excellence or inferiority of an art depends upon the talent or incompetence of a person. If men have not the ability to master an art, it is not in the power even of their fathers or elder brothers to make them, far less sense would there be in the Government to address them publicly on this head.
>
> "If such of the Chinese, as are skilled in the arts, be willing to trade their works with your Excellency's nation they are of course at liberty to do so."[1]

Here was *laissez faire*, indeed. Out of five thousand square feet of space officially allocated, the Chinese Empire modestly requested a paltry three hundred, a request followed up with such manifest indifference that the Commissioners were driven to the humiliating expedient of whipping round private collections in England for Chinese specimens, in order not to disappoint the expectations of a public anxious for a fabulous Oriental display. Some fifty cases of goods were the harvest of this desperate gleaning. But on the whole the attempt was not unsuccessful, and a tolerable if curious collection was raised.

[1] *1851 Commissioners' Records.*

Then, too, there was the Russian Empire: great, secret and unpredictable. Her government had asked permission to dispatch 113 crates of exhibits before the winter should have frozen her ports. These, then, in the autumn of 1850, were presumed to be on the way. They arrived in due course. Eight months later, on the opening day at the Crystal Palace, their contents were still unpacked.

The United States' contributions were to be dispatched in one block and shipped across to England in a vessel specially offered by the American Navy for this purpose. But the Executive Committee of the United States felt themselves unable to organise their exhibits in the relatively short time at their disposal, and begged indulgence for some want of punctuality on the part of the remoter States behind the Rocky Mountains. The Royal Commissioners pointed out the extreme importance of adherence to regulations which provided that all goods were to be delivered at the Exhibition building on or before March 1, 1851.

This produced a plaintive reply from the American Commissioners. Time, they felt, was a most limiting factor in an undeveloped country, and Professor Walter Johnson of the U.S. Commission, urged special consideration on the grounds that

> ". . . we are all very remote from the scene of the Exhibition, that different parts of the country are much more remote from each other than the nearest parts are from London. The four months yet to intervene between the present date and the 1st March seems a very short time in which to give full effect to our wishes in regard to the industry of so wide an extent of country."[1]

Still, this was hardly the concern of the Royal Commission, which had begun inviting international contributions a clear twelve months earlier.

Efforts to assemble a representative British collection were apt to be equally frustrating, and there were moments when the hearts of the Executive

[1] *1851 Commissioners' Records.*

Committee must have sunk pretty low. Dumfries was announcing its intention to display Paris Hats; hats which were to be manufactured in Dumfries, with Paris linings and French names. Then the jewellers, Messrs. Hunt and Roskell, faced the awkward situation that if, as they proposed to do, they showed £100,000 worth of jewels, their trade would suffer correspondingly on account of the capital locked up in the Exhibition. They accordingly asked for leave occasionally to exchange items of exhibit: diamond for diamond; tiara for tiara.

* * * * *

That autumn the Catholic hierarchy had been restored in England, a proceeding at once denounced as Papal Aggression, and the new Archbishop of Westminster, Cardinal Wiseman, unaware during his triumphal progress across Europe of the resentment aroused by his appointment, still more by his glowing letter sent out of the Flaminian Gate at Rome, arrived home to find himself vilified, publicly attacked, and even burnt in effigy. In no time his features had become familiar: *Punch* alone selected him repeatedly throughout that winter and the following year as a target for ridicule, hostility and vindictive abuse. Hardly a contemporary cartoon failed to reproduce the tall figure, round face and steel spectacles, impassive beneath the immense cardinalitial hat, from which depended its twin triangular tassels. The outcry was sustained and vociferous, re-echoing in places supposedly remote from controversy. At Madame Tussaud's a model of the new Archbishop of Westminster was displayed in full ecclesiastical splendour, and far away in Brussels the Chief Commissioner for Belgian exhibits drafted an anxious letter to his country's representative in London, M. van der Weyer.

This letter concerned a rather delicate matter. Guidance was entreated. It appeared that an

embroiderer of Brussels, by name van Halle, was intent on exhibiting a group of effigies, representing the Pope, *Pio Nono*, and a suite of twelve cardinals, of which one bore a striking resemblance to Nicholas Wiseman himself.

The group was described as being most magnificently dressed in sacerdotal vestments, and though in favour of these, the Commission was distinctly embarrassed with regard to the personalities doing duty as effigies, since the possibility of their welcome in England was by no means certain. English considerations were of course paramount; the Belgian Commissioners were anxious for guidance on the subject. The reply of M. van der Weyer to their enquiries was, under the circumstances, a masterpiece of diplomatic skill:

> "Si M. van Halle était fabricant de poupées, de mannequins, de figures en cire, je concevrais son désir et son droit d'exposer à Londres le Pape et ses douze Cardinaux; et plus la resemblance (celle du Cardinal Wiseman surtout) serait grande, plus M. van Halle aurait du succès. Mais il est Brodeur, et ses vêtements sacerdotaux peuvent être l'objet de l'admiration du monde *sans* les mannequins, dont l'importation serait, dans les circonstances actuelles, un acte de haute inconvenance, de quelque point de vue qu'on l'examine. La question ainsi posée se trouve résolue: les vêtements, oui; les poupées, non; car je ne pourrais consentir à ce que, revétues d'un caractère special d'inviolabilité, elles fussent placées sous la protection exceptionelle de la Légation du Roi."[1]

So the figures were turned down as inappropriate, and in the official catalogue van Halle is described as the exhibitor of church ornaments and Brussels embroidery.

Be this as it may, a paragraph in a contemporary journal would suggest that his efforts at exhibiting his waxworks were not altogether unsuccessful; for

[1] *1851 Commissioners' Records.*

among the Belgian exhibits were models of Archbishop d'Affré of Paris, St. Charles Borromeo and St. Thomas à Becket, and that among those noticed at the Great Exhibition, examining in detail the exquisite embroideries, was none other than Cardinal Wiseman himself.

CHAPTER VIII

THE SELECTION OF BRITISH CONTRIBUTIONS WAS AN affair of delicacy equal to, if not surpassing, that of the foreigners. Redundancy was feared; inferiority dreaded. Local committees, especially in London, were developing symptoms of intense jealousy, and committees of selection and rejection were set up by Playfair in order to admit only such articles as might seem likely to enhance the Exhibition's prestige. In fact it was mainly through Playfair's diplomacy that plans were able to be set on foot which could not be traced back to official sources, and discretion at this moment was perhaps the most valuable asset on the side of the Commissioners. Certainly Playfair did his utmost, beset with problems as he found himself. He ironed out differences and smoothed ruffled feelings; on one occasion he had even prevented the inflammable Cole from resigning. Then, in November, and with only one month to go before the Committee's final decisions with regard to submitted articles, crisis broke out.

It had been developing for some time. It concerned the Prince Consort's favourite theory: classification of exhibits under a philosophical system. It was a system which could not and would not work, but since he had set his heart upon it, it had been given the benefit of a trial. Now it was at last clear that it was an impossible system, and a creeping paralysis was gradually overtaking the work of the committees, which were becoming bogged down. Finally, after a patient and thorough investigation with Lord Granville the Executive Committee, Cole and Dilke in particular, declared themselves incapable of continuing.

The Prince had originally intended the goods from all countries to be arranged under one general classification. But what with the scale of the Exhibition, and the short lapse of time between the completion of the Building and its public opening on the following May 1, even the simpler, geographical arrangement of the combined exhibits was going to be a formidable enough business, as it was.

Reid saw it clearly. The Prince's unbusinesslike mind was leading them straight into chaos from which was bound to come disaster.

Playfair's scheme was simpler, and under such an arrangement each country would stand to benefit by displaying its own products to advantage. Early in December Reid, Dilke, Cole and Playfair together stated their feelings in a written memorandum. They foresaw the consequences of adopting the Prince's scheme; the United Kingdom alone contained 30 classes. They foresaw these 30 classes swelling into 2,000 by the time foreign and colonial productions were sorted out, and if each class were to hold only seven exhibitors, some 14,000 places would have to be assigned, and this would fall on the shoulders of the Executive Committee alone. It was a horrifying prospect. It should be changed whatever happened. The Executive's feelings overflowed into protest. "It cannot," continued their unhappy memorandum,

> "it cannot be safely calculated that there will be *40* clear days for attempting such a rearrangement; looking to the shortness of time, the inadequate vacant space, and the general magnitude of the works, the Executive Committee apprehend that they would fail in their duty if they expressed any hopes of being able to effect this rearrangement, and open the Exhibition on the 1st of May."[1]

They urged in consequence the inevitable necessity of adopting the first and final method of arrangement,

[1] *1851 Commissioners' Records*

geographical in basis; each nation arranging its products in a given order.

So that no one nation should obtain an unfair advantage over another through disproportionate attraction, the centre of the Transept was to be reserved for the countries which were receiving only a moderate allotment of space. Those with the largest allocation were placed furthermost from the centre, so that the attractive elements might be evenly spread throughout the entire building. The lighter articles were to be placed in the galleries, and Cole, resourceful as usual, contrived that a frontage for each nation should border on the central aisle.

Playfair had meanwhile been organising his simplified system upon which the juries were to work. This embraced the considerations upon which awards would be made. He sub-divided the four great categories into 30 sections. *Raw Materials*, for instance, were to be judged on their value and importance, as well as on the excellence of a particular specimen. But in the case of prepared materials under this category juries would have to weigh various other factors: novelty, importance, superiority of skill, and ingenuity displayed in the processes of preparation. *Machinery* on the other hand would be judged on grounds of novelty, superiority of execution, increased efficiency or economy; the social or functional importance of the article, and the difficulties in perfecting it.

Manufactures were to be considered on account of their usefulness, their permanence in dyes, the improved forms of articles of utility, their quality and skill in workmanship. The new use of known materials was also to be taken into account as well as new combinations of materials as seen in metals and pottery. So, too, was beauty of design in form and colour, having regard to utility. And lastly relative cheapness of production.

Sculpture, Models, the Plastic Arts. These were to be

rewarded according to beauty and originality; their improvements in processes of production; of application of art to manufactures, and to their "literary" interest.

It all came down to a simple principle: excellence was to be rewarded in whatever form it presented itself.

The following list gives the division of exhibits proposed by Playfair: it is taken from the instructions issued to the juries themselves:[1]

Raw Materials

1. Mining, quarrying, metallurgy, and mineral products.
2. Chemical and pharmaceutical processes, and products generally.
3. Substances used as food.
4. Other vegetable and animal substances, and those used in manufactures, implements, or for ornament.

Machinery

5. Machines for direct use, carriages, naval mechanism.
6. Manufacturing machines and tools.
7. Civil engineering, architectural and building contrivances.
8. Naval architecture, military engineering, etc.
9. Agricultural and horticultural machines and implements.
10. Philosophical instruments and miscellaneous contrivances, etc.

Manufactures

11. Cotton.
12. Woollen and worsted.
13. Silk and velvet.
14. Manufactures from flax and hemp.
15. Mixed fabrics; shawls.
16. Leather, saddlery, harness, skins, fur, feathers, hair.
17. Paper and stationery; printing and bookbinding.
18. Woven, spun, felted and laid fabrics, shown as specimens of printing or dyeing.
19. Tapestry, carpets, and floor cloths; lace and embroidery; fancy and industrial works.

[1] *1851 Commissioners' Records.*

MANUFACTURES—*cont.*

20. Articles of clothing for immediate, personal or domestic use.
21. Cutlery and edge tools.
22. Iron and general hardware, locks, etc.
23. Working in precious metals, and in their imitation; jewellery and all articles of virtu and luxury, not included in the other juries.
24. Glass.
25. Ceramic manufacture, china, porcelain, earthenware.
26. Decoration in furniture and upholstery; paper hangings, papier-mâché, japanned goods.
27. Manufactures in mineral substances used for building or decorations; as marble, slate, porphyries, cements, artificial stones, etc.
28. Manufactures from animal and vegetable substances, not being woven or felted, or included in other sections.
29. Miscellaneous manufactures and small wares.

FINE ARTS

30. Sculpture, Models and Plastic Art.

Beside its obvious advantages to the juries themselves, this classification showed the exhibitor the section in which his article naturally fell. And though by such a detailed system it was not intended to separate an individual exhibitor's goods, still, clearly, the Foreign Commissioners, their agents and exhibitors would lighten the juries' task if they adhered to this plan. Indeed, they were a most bewildering collection to classify: for example, the first category included metals and ores, and methods of rendering more generally useful ordinary metals and their alloys. All sorts of processes were revealed. Common metals and nobler metals; metals in various chemical states and combinations; antimony, arsenic, bismuth, cadmium, cobalt, nickel, gold and silver, mercury, palladium, platinum; pigs and ingots, sheets, bars and wires; bronze, gun, bell and speculum metals; Britannia metal, German silver, pewter, etc., etc.

Mineral products included fuels, coals, lignites and peat; bituminous bodies and native naphtha. Massive minerals like siliceous or calcareous free stones and flags. Granite, porphyritic or basaltic rocks, slates, marbles, spars, alabasters, serpentine rocks, pozzuolanas, trass, gypsum, felspars, limestones and many others.

Then came the chemicals used in medicine and pharmacy. These include alkalies, earths and their compounds. Tinctures, extracts and inspissated juices. Unguents, spermaceti, anti-spasmodics, musk, castoreum, civet, and ambergris. Resins, gum resins, olio resins and balsams. Aloes. Essential oils. Cajeput, savine, turpentine. Fixed oils, almond, castor, croton and olive oils. Vegetable parts such as digitalis, hemlock, henbane, jalap and ipecacuanha.

There were also the imported barks: cinchona, cascarilla, cusparea; cereals, pulses, oils and seeds. Dried fruits. Teas and their substitutes. Coffees and cocoas; chicory roots; *Amande de terre.* Guarana bread. Spices and condiments. Cinnamon, cassia, nutmegs and mace. Cloves and cassia buds. Peppers, capsicum, mustard, vanilla, pimento, cardamoms, ginger, turmeric. Drugs. Liquors, fermented and intoxicating. Starches; all kinds of arrowroot; *Tous les mois;* sagoes, cassava, tapioca, lichens and so on, right through the vegetable kingdom.

Yet this selection is taken only from the four groups in the division of Raw Materials. Machinery contains six such divisions; Manufactures nineteen. The catalogue is endless and absorbing; capable of any combination of variations, and would fill pages. One group more taken at random might be listed in order to give some idea of the proposition that lay ahead of the juries. Let us take one of the sub-sections of division No. 2: *Machinery for Direct Use.* Here among the conveyances of the 'fifties, are grouped an assortment of carriages. Carriages for town use; dress *vis-à-vis,* dress coach, dress chariot. Landau, landaulet,

step-piece landau, barouche, sociable. Carriages for travelling: coaches, chariots, *britskas*, *dormeuses*, post chariots, *droitskas*, *fourgons*, sledges. While for more general purposes are *basternas*, broughams, clarences and the pilentums. So the list runs on for pages and pages. It seems to cover every possible material and object, whether in a natural or a processed state. But its classification is clear to the point of seeming simple.

As for the nature of the awards themselves, these seemed about to present a problem even more baffling than those awaiting the juries.

It will be remembered that during the early stages of organisation £20,000 had been raised and set aside for the provision of prizes; large sums had been breathed, mentioned, even, in the hearing of the intending contributors.

But time had gone by, and the Commissioners had reconsidered their position. Like Mr. and Mrs. Dashwood, they now began to regret what seemed to them perhaps an unreasonable outlay. The proposal was, after all, likely to raise a hornets' nest about their ears. Some of the most respectable manufacturing firms were against the idea, strongly resenting the notion of competing for mere money prizes. A few had taken fright and hinted at withdrawing. Medals would be a far more satisfactory method of rewarding merit; a means far less likely to arouse envious or jealous passions among competitors themselves. At the same time, combined with such an award the right might well be reserved to confer a grant of money in certain deserving cases. With such a safeguard in mind, the Commissioners called once more for competitors: this time to submit designs for three medals to be struck in bronze.

Although jealousy might be allayed, apprehension still existed. The Commissioners were uncomfortably perched, as it were, upon a hedge of thorns. The principle of any award for varying degrees of excellence was, to tell the truth, dreaded beyond

measure. Its consequences were expected to be as harmful as those of the banned money prizes themselves. Thus, the obvious drawback to awarding a top prize was such that while the winner might have won by only the narrowest margin of superiority, the prestige gained would be immeasurable, and the effect upon the trade of rival competitors utterly damning. So that while probable defeat became a bogey, possible success appeared like a *Fata Morgana*. Desirable, yet to be prudently avoided.

At this stage of the proceedings, when some manufacturers were on the point of withdrawing from the contest altogether, others declared themselves ready to exhibit only on condition that their goods might be marked as non-competitive. It was an interesting situation. A people professing enthusiasm for sportsmanship seemed scarcely to reflect that boundless self-confidence for which everywhere they were so justly admired. But then the exhibitors were professionals. They were on the whole a hard-bitten lot. Business was business, and the coming exhibition, whatever the sentimentalists were saying was going to prove some hard facts. "You must know", wrote one exhibitor[1] after the opening day,

> "that our reputation has been steadily increasing for many years, and as this Exhibition was to settle the point as to the super-excellence of any one person, we had resolved to make a grand effort and have expended very much money and put ourselves to great inconvenience both with time and money, but we are amply rewarded by the knowledge that we decidedly stand the very first in England, some also add in the world."

Business was business. Exhibitors knew what they were to be up against; they understood the meaning of equality of opportunity. But of the tenderer sentiments, the intellectual idealisms glorifying the pacific instincts of mankind, they were, perhaps, more than a little sceptical.

[1] Minton papers.

Victoria and Albert Museum

THE CRYSTAL PALACE

The end of it was that the Commissioners retreated. After considering the subject most carefully, they gingerly withdrew. They decided that in view of the aims of the exhibition—the general encouragement of industry, rather than of individual rivalry—and in view of the near impossibility of any accurate decision by tribunals as to *relative* merit in an exhibition of different nationalities showing goods which would need to be judged by different standards, the conferring of medals for varying degrees of excellence of the same kind was abandoned. The Commissioners, though openly anxious to reward merit, were even more anxious to avert jealousy. They ruled that juries were to reward all articles seeming to them outstanding, of whatever nature that excellence might pertain. Their prizes were to consist of three medals of varying size, marking merit of different kinds and character, but not indicating degrees of excellence. In other words, that excellence of production was to be looked for as much in the cheapest and gayest calico print for the Brazilian market, as in the finest length of *mousseline de soie*.[1]

The winning designers were Hyppolite Bonnardel of Paris; Leonard C. Wyon and G. G. Adams, both of London. In due course[2] their medals were approved, with appropriate inscriptions selected by a special committee composed of the Dean of St. Paul's, Lord Lyttelton, Mr. Gladstone, Mr. Macaulay, and the learned Dr. Liddell.

But the Council of Chairmen was still not quite happy about the nature of the rewards. Finding "that it would be impossible to lay down any rules"[3] whereby the appearance of discrimination was to be avoided, they withdrew the third medal altogether as a prize, reserving it for the jurors as a reward for their services. Two medals remained. One of these

[1] *First Report of the Commissioners for 1851.*

[2] There had been delays : Adams and Wyon were jealous of one another.

[3] *First Report of the Commissioners for the Exhibition of 1851.* App. XIX.

was to be sanctioned by the combined jurors to all exhibitors judged worthy. The other to be bestowed only by the Council itself in exceptional circumstances. The prize medal to Wyon's design, bore the inscription, *Dissociata locis concordi pace ligavit* and was almost exclusively reserved for rewarding remarkable inventions conferred in respect of certain standards and principles, such as utility, inexpensiveness, attractiveness, and suitability for certain markets.

The Council Medal, Bonnardel's, inscribed *Est etiam in magno quaedam respublica mundo*, was intended to reward some important novelty, something expressing a new or original idea, in material, or process of manufacture, or originality and beauty of design.

If the aim was lofty, the principle was not without its own burden of complication, and although the intention was to defeat the element of rivalry, it ended by creating a good deal of confusion, owing partly to the fact that the jurors, being drawn from every competing nation, came in many cases from countries accustomed as a matter of course to the delicious stimulus of rival competition in their own expositions. To these the new and unaccustomed principle of distinguishing only by means of the two medals was completely bewildering.

The appointment of the jurors themselves was a major preoccupation for the Commissioners. It was clear from the start that the Exhibition, being international, would require the setting up of juries on a similar basis, appointed in proportion to the amount of exhibitors coming from their country of origin. Thus, since half the Exhibition was British, half the jurors were to be British too, but in order to avoid inevitable unpleasantness in appointing the remaining number of jurors, the Foreign Commissioners were invited to decide a just scale of appointments. Eventually, to mutual satisfaction, thirty juries were chosen: each juror fortified by a personal warrant from Prince Albert, each jury with a chairman of its

own. These chairmen, half of whom were British and half foreign, were in turn constituted into a Council to which was assigned the task of regulating juries; its President was Lord Canning, one of the chairmen himself.

One more classification remained. It was clear that every country could not be represented on every jury. So to reduce jealousies and suspicion of unfairness it was decided that awards, before being finally made, should be confirmed before a combined meeting of jurors on several classes of allied subjects; a panel on which every country would be bound to be represented.

The juries were for the most part to be composed of persons[1] eminent in various branches of the Arts and Sciences, a cultural opportunity which the Commissioners were not slow to seize. Feeling that never again might a gathering of such combined distinction, celebrity and intellect be herded together into this unique glass ark, they requested the issue of a report from each separate jury on its own class of the Exhibition, for the purpose of putting on record the existing state of industry and knowledge brought to light by the approaching occasion.

* * * * *

There were still a number of vexatious problems to be considered. Among these exhibitors needed reassuring that new designs would be protected from piracy; the question of which was still open. Lord Granville had passed a Bill through the House of Lords which was, he had written to Colonel Phipps, "so mutilated in the House of Commons by Lawyers that it had caused much discontent among exhibitors."[2] It was followed by the "Protection of

[1] Thirty-two were French, headed by their President, Baron Dupin. These were named to act on the General Jury and constituted by their Government into a National Commission. Among their "*Membres Titulaires*" was Hector Berlioz.

[2] *1851 Commissioners' Records.*

Inventions Act 1851", by which any article shown by an inventor or designer was protected for twelve months on the same terms as if he had taken out letters patent. During this period the proprietor found himself protected by a fine of from £5 to £30 for each separate offence, and an elaborate procedure in triplicate concluded the measures to be taken by the applicant for the protection of his invention.

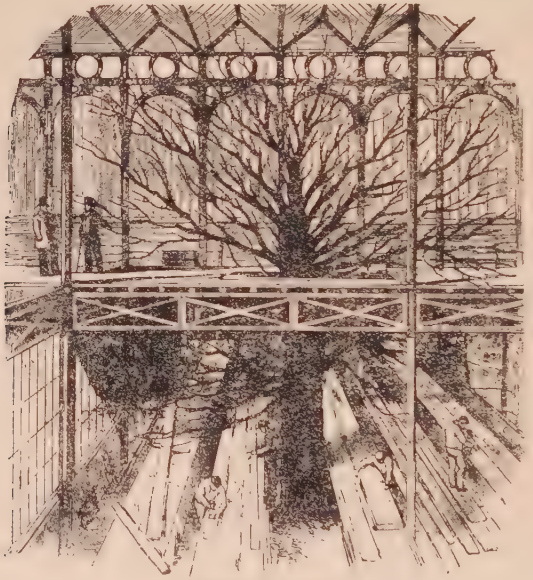
CHAPTER IX

WINTER CLOSED IN UPON HYDE PARK AND FOUND IT transformed. Lilliputian figures, swarming backward and forward inside the vast enclosure, felled trees, crawled up ladders, hauled upon pulleys, clambered across the Transept roof or balanced precariously along the gutters. Teams of sweating horses thundered in and out of the building raising girders and timbers, and far above, high in the roof, the glaziers could be made out swinging in their cradles as they fitted in the panes. So by an endless process of repetition the monster building was being erected, as if by magic, in the winter murk. When dusk fell early and braziers glowed, the scene resembled a bivouacking army. Londoners peering furtively toward the forbidden zone saw little, but to the curious came reports of the strange and mysterious structure blossoming in concealment like a gigantic Christmas Rose.

Acres of hoarding intensified the mystery. The knowledge, also, that two thousand workmen and four steam-engines had been on the job for months past confirmed belief that work must soon be completed and new developments be on the way.

Delays had been endless. As 1851 approached, the contractors, originally so sure of being out of the building by New Year's Day, were shortly before this still wrestling with engineering problems, minor vexations, and above all the obstinate recurrence of variations upon certain tiresome themes. The tree had come back into the picture; last of that contentious clump which had formed part of the row of elms reaching the south-western portion of the site itself, and over which Lord Seymour will be

remembered as having unaccountably developed obstructionist tactics. Fearing the loss of much valuable time through fruitless discussion the Commissioners had taken a gamble. They had hoped that with the progress of building, the presence of this survivor would have enough nuisance value to obtain some relaxing of the conditions. As a tree it was not worth preserving; even the workmen treated it with scant



Sibthorp's Elm.

By courtesy of the Proprietors.
of the *Illustrated London News*

respect. Unlike the noble elms embellishing the Transept, this was a poor, a worthless, an insignificant tree which if allowed to remain would merely discredit everyone concerned, and become, besides, injurious to the Exhibition. Yet the Commissioners had throughout strictly observed Lord Seymour's conditions. They had not cut it down. Now, at the end of the year, they had again addressed him in the hope that he might at last give way. He did nothing of the kind. It was a special tree. Not for nothing

was it Sibthorp's elm, remaining as it would a tangible proof of Sibthorpian opposition. In the end it had to be accommodated. It was fated to remain on in the corner of the nave, a nuisance to all around it and a hindrance above, where, to allow for its inconvenient height the gallery had to be built round the circumference of its spreading though meagre boughs.

* * * * *

On February 4, the opening day of the new session, Colonel Sibthorp delivered one of his more bombastic utterances. The speech from the Throne had contained a reference to the flourishing state of trade and manufactures, and the member for Lincoln had let fly. He advised the House to go down to the City and find out what was thought there of Free Trade,[1] "and of that fraud upon the public called a 'Glass House'—the 'Crystal Palace'—that accursed building, erected to encourage the foreigner at the expense of the already grievously distressed English artisan. Would to God—he had often wished it—that a heavy hailstorm or a visitation of lightning would put a stop to the further progress of that work ! Their property, their wives and families would be at the mercy of pickpockets and whoremongers from every part of the earth. Oh, it would be a beautiful sight ! There was a charming building, and there would be the most entertaining recreation provided . . ."

Thus, with a crash of glass the like of which would never have before been heard, the Colonel hoped to see the end of this unfortunate adventure.

The Opposition had thus returned to the offensive. They had also been intent upon spreading dismay among the expected visitors: the building was unsafe; it would be incapable of withstanding heavy gales, the galleries would fall in under the weight of crowds and exhibits, sheets of falling glass would endanger

[1] Hansard : *Parliamentary Debates*, Vol. CXIV.

life and property. Even the Astronomer Royal demonstrated in a pamphlet that the building was insecure and must inevitably collapse. As far as this went, the Commissioners themselves had all along been uncertain as to what might not be the probable effect of a series of storms, and Colonel Reid as an authority was as a matter of course disturbed by this possibility.

On November 22 a gale had sprung up to confute the prophets. It had done no damage to the Building save to whirl away a few loose panes of glass, and bring down some scaffolding. Cubitt when consulted had suggested safeguards. He proposed to brace the Building by tie rods; a device which promised to add another £1,000 to the total cost. It cannot be said that public safety was not at all times the cause of constant concern among Commissioners and Executives, and extraordinary precautions against every conceivable disaster were taken.

Still, by January 1, 1851, the Commissioners were not yet in possession. Prince Albert had been all for pressing forward with rights of contract, and for excluding all visitors, but to take possession while work was still unfinished would, it appeared, merely have been to incur liability for any resulting accident or damage; after all, it seemed certain that February 1 would see them in full occupation. They decided to wait until then.

But no sooner had the Commissioners taken possession than in had come the rain. They, for their part, began to wonder whether the damage could be repaired during the limited time in hand; matters were not simplified by Fox and Henderson having entered into other large contracts, and having ceased giving priority to the Exhibition building. Mr. Fox, it is true, had promised to stop up the worst leaks before the opening day, but the structure that had resisted the winter gales now seemed incapable of withstanding the relentless, insidious drips. To

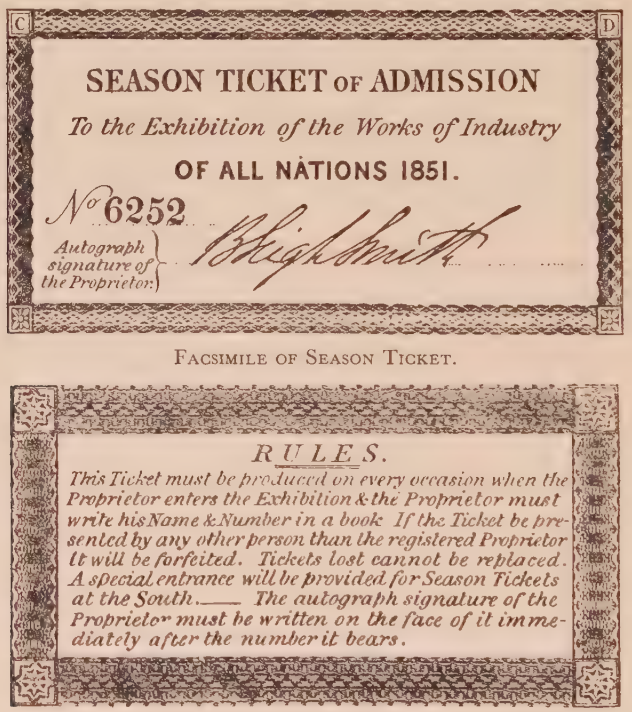
Colonel Reid it was naturally very perturbing. By mid-March the rain was pouring in freely at more than a thousand places. Exhibitors were complaining about their damaged goods; Foreign Commissioners were in a state of alarm, and Cole and Dilke going from one to the other in a frantic attempt to placate them all. Broken glass was everywhere, and though the window-sashes could withstand gales, the contractor would still have to make the roof watertight. This would take time. Even so, it was not the end of the trouble. The hollow columns were next found to be choked up, so that the water rose inside them and bubbled out at the holes which had been drilled for the gallery handrails.

But in due course all these difficulties were overcome; tackled by Reid in his soldierly manner. He, indeed, had left nothing to chance. He set doubts at ease by having the galleries tested by parties of sappers who trundled truckloads of cannonballs along them from bay to bay; a performance observed with interest by the Queen, the Prince and the royal children. He tested wind resistance at all the different angles of the roof. Fire precautions were intensive; superbly planned. So complete, indeed, that on paper at least there was a stopcock or hydrant convenient to every accessible point. Forty-four fire stations, and hundreds of buckets were in readiness throughout the building, and a squad of small boys was employed solely to scuttle under the boards and clear away shavings, tow, or other combustibles which might fall through the spaces in Paxton's hygienic floor.[1]

It is at about this time that the question of admissions takes on a controversial aspect. There had been two schools of thought: to pay or not to pay, and the Commissioners who meant to discharge their

[1] During the whole period of the Exhibition there was only one fire alarm, when flames discovered in Fox and Henderson's office were promptly put out.

debt to the Bank of England from the proceeds of gate money, had never been in any doubt as to their own intentions. They issued a certain number of season tickets at £3 3s. 0d., and £1 was to be charged for admittance on the second and third days. The fourth day's admission was to be 5/-, and this was to


SEASON TICKET OF ADMISSION

To the Exhibition of the Works of Industry

OF ALL NATIONS 1851.

No 6252

Autograph signature of the Proprietor.

RULES.

This Ticket must be produced on every occasion when the Proprietor enters the Exhibition & the Proprietor must write his Name & Number in a book. If the Ticket be presented by any other person than the registered Proprietor it will be forfeited. Tickets lost cannot be replaced. A special entrance will be provided for Season Tickets at the South.—— The autograph signature of the Proprietor must be written on the face of it immediately after the number it bears.

FACSIMILE OF SEASON TICKET.

continue until May 22, when the price would drop to 1/- for the first four days of the week, rising to 2/6 on Fridays and 5/- on Saturday afternoons.

There was even a half-hearted attempt at one moment on the part of the Executive Committee to announce that no change would be given at the doors, but this suggestion was crushed by Brunel and his colleagues of the Great Western Railway as a scheme impossible to carry out. Then the Commissioners

were stated to "prefer" not to give back change,[1] an announcement which was weak and gave an air of uncertainty to their policy. But all these schemes were given a shock in the New Year by Paxton, whose head had been turned by the amazing events of recent months. Joseph Paxton, the prima-donna of the Crystal Palace, addressed Lord John Russell in an open letter to *The Times*, and advocated free admissions to the Great Exhibition. His argument was that to tax some seven thousand exhibitors and their families for their own contributions to the world's prosperity would be incommensurate with the enlightened spirit of Free Trade itself. He proposed payments for the first fortnight, and on every succeeding Wednesday, by those who were prepared to pay for an exclusive view. He concluded his appeal in an emotional strain: "Shall the Exhibition of the World's Industry be free to those whom England invites to meet in generous rivalry? Or shall we send forth invitations, and then tax our guests? . . ."

It was an uncomfortable suggestion. As tactless as it was inopportune. The Editor of *The Times*, John Thadeus Delane, prudently consulted Lord Granville and embodied his opinion in a cautious leading article. Granville instructed the Executive Committee to disown the idea and inform all newspapers that the Commissioners, having started the whole enterprise were still in favour of its being self-supporting. At the same time there was Samuel Jones Loyd, one of the guarantors, threatening to state in public his opinion that Parliament should pay for the whole thing. "The Guarantee", commented Granville to Grey, "has had the same effect on his head as the building on that of Paxton. I hope he will not do what he says, as he will cause mischief to us, and cover himself with ridicule."[2]

There followed rebuffs, admonishments, tokens of

[1] *1851 Commissioners' Records.*
[2] *Ibid.*

royal displeasure, apologies, some eating of words and humble pie. But the idea of free admission persisted, on and off, right up to the time of opening; the idea that no money should be taken, and that Paxton after all was perhaps right. That the nation should not capitalise upon the contributions of others; that there should be no exemptions. In short, that though Britannia rattling a money-box in a worthy cause might provide a legitimate occasion for self-esteem, to see her collecting shillings at an Exhibition gate was a sorry and ignoble spectacle.

Charles Babbage, who could usually be relied upon to thrust at the Commissioners' policy with accurate if wayward dexterity, certainly supported them in the principle of payment for admission, though differing from their decision as to rate and scale; "the Commission", he wrote,[1] "seem to have made a very fair selection for the commencement of their experiment." This brilliant talker with his entrancing mind had been carrying on guerilla warfare with the Government for refusing him supplies for his new calculating machine on the grounds that it had never been completed. He never forgave them, or their associates the Commissioners, who he accused of inexperience and of inconsistency, and his controversial little work is still worth reading today.

Feelings on the whole question of admissions were strong. When Macaulay and Dickens met Granville at Lord John Russell's Dickens felt that shilling entries should not be too long delayed; Macaulay that they should be in force on the first day, at all events.

* * * * *

Certain as it is that the Protectionists were not disposed to particular tenderness toward the parents of the lusty baby with which Free Trade was so shortly to present the country the alarm was by no means confined to opposition at home. The project as a

[1] Charles Babbage : *The Exposition of 1851.*

whole was deeply distrusted by the rulers and governments of the continental states so lately restored to their uneasy thrones. The King of Prussia, Frederick William IV, filled by his government with direst forebodings and by his cousin the King of Hanover with alarm and despondency, had forbidden his son the Crown Prince, his daughter-in-law and their own son from attending the opening ceremony, to which they had been invited by Queen Victoria.

Ernest Augustus of Hanover, the fifth son of George III, had written Frederick William an absurd letter, the tone of which was as alarmist as its contents proved to be unsound. "I hear", he wrote

> "that the Ministers as well as Prince Albert are beginning to jibber with anxiety over this rubbishy Exhibition in London. I beg you, if you have time, to get read to you the speech of one of the most prominent and cleverest statesmen that we have, Lord Lyndhurst . . . who gave a complete exposé in Parliament last Thursday of the infamies, plots and *menées* of the excommunicated of all lands, who are now in London . . . I am not easily given to panicking, but I confess to you that I would not like anyone belonging to me exposed to the imminent perils of these times. Letters from London tell me that the Ministers will not allow the Queen, and the great originator of this folly, Prince Albert, to be in London while the Exhibition is on, and I wonder at William's wishing to go there with his son."[1]

Had it not been for the character shown by the Crown Prince at home, no doubt, he would have remained. But Prince Albert's intervention, and the helpful co-operation of Baron Bunsen defeated the argument. The Prussian ambassador in fact did his utmost to deny the rumours which were by now running like wildfire through the courts of Europe, and in the end the Crown Prince and his wife were allowed to travel to the dangerous area of London.

In spite of all these obstructions the Prince Consort held on with tenacity to his scheme. And when it

[1] Jagow : *Letters of the Prince Consort*, 175.

was attacked by his relatives, he gave as good as he got. The King of Prussia received a strong piece of his mind:

"The rumour that the Court has been forced to make up its mind to desert London during the Exhibition is one of those many inventions concocted by the enemies of an artistic and cultural venture and of all progress in civilisation, to frighten the public.

"From the very start they have shown remarkable persistence and ingenuity.

"Mathematicians have calculated that the Crystal Palace will blow down in the first strong gale, Engineers that the galleries would crash in and destroy the visitors; Political Economists have prophesied a scarcity of food in London owing to the vast concourse of people; Doctors that owing to so many races coming into contact with each other the Black Death of the Middle Ages would make its appearance as it did after the Crusades; Moralists that England would be infected by all the scourges of the civilised and uncivilised world; Theologians that this second Tower of Babel would draw upon it the vengeance of an offended God."

Then, overcome by irony, he concluded:

"I can give no guarantee against these perils, nor am I in a position to assume responsibility for the possibly menaced lives of your Royal relatives. But I can promise that the protection from which Victoria and I benefit will be extended to their persons—for I presume we also are on the list of victims."[1]

* * * * *

The Russian government, too, from first to last suspected the undertaking. They felt, not without reason, that the excuse of the Exhibition would provide a convenient opportunity for rallying in England those friends of disaffected foreigners who had already taken refuge there, and that London with its sprawling and uncharted underworld would offer greater facilities for conspirators than any other

[1] Jagow : *Letters of the Prince Consort*, 176.

centre at such a time as this. They, for their part, declared their official attitude by a wholesale refusal of passports, a measure involving the most exclusive and distinguished members of Russian society who had applied to come to England. It was a sweeping gesture, since so many were likely to be affected. Count Alfred Potocki is quoted by Lord Granville as writing from a visit somewhere in the Steppe, and as saying that he could not discover anyone he met who was not coming to London in 1851.[1] The British ambassador, Lord Bloomfield, stated in one of his dispatches the opinion that the Russian government were deliberately out to discredit the objects of the Exhibition. But while dissuading their subjects from attendance, they had no objection to their contributing, and 113 cases of Russian goods were credited with being somewhere on the way, though as yet mysteriously elusive.

Dispatches from Vienna suggested the same official reactions as those in Berlin and St. Petersburg: the wounds of 1848 were unhealed. Here foreign revolutionaries well known to the Government had already taken out passports for the alleged purpose of visiting the Exhibition, but it was confidently believed that this was not the real nature of the visit. Naples, too, reflected the same fears and suspicions, and King *Bomba*, haunted by the unlaid ghost of the Parthenopean Republic, discouraged his adherents from travel in 1851, and entrenched himself more deeply than ever among the tattered phalanxes of his *lazzaroni*.

These apprehensions did not pass unobserved in England, and if a Whig government tried to laugh them off as reactionary, there was still Lord Palmerston at the Foreign Office. And Palmerston's views were inclined, for once in a way, to be in complete agreement with those which were agitating the various courts of Europe. He was, in fact, extremely

[1] *1851 Commissioners' Records.*

wary. Dispatches were sent in every direction. All the British representatives abroad were instructed to contact the authorities at their respective capitals and to apply for police agents who might assist the Metropolitan police force to identify the more dangerous characters. Frankfurt was chosen as the centre most likely to supply information. A person named Eberhardt, considered the best-informed police agent in Germany, was said to know every suspicious character by sight, and this at a time when parts of the country—Baden, for instance, with its gaming-tables and raffish adventurers, deep play and suicides —were hotbeds of delinquency.

Anonymous letters were reaching Lord Normanby in Paris; the type of secret communication which concerned agents and conspirators said to be fostering a general movement for revolution. Desperate men said to be well organised had selected Germans rather than Frenchmen to master more fluently the English tongue, and the British ambassador in his dispatches home advised every possible precaution on the part of the Government. Lord Normanby, reporting[1] to the Foreign Secretary concluded by noting a new feature of the intended Red influx into England: absurd their plans might be, they were nevertheless sufficiently important to be financed partly by subscription among the members themselves. The *Montagnards* were definitely subscribing a fixed portion of their pay to defray some of the expenses of this political pilgrimage. And the Swiss *chargé d'affaires* in Paris had cautioned the British ambassador against the granting of visas for England to seventeen French refugees expelled from Switzerland.

There was, too, on top of all this and known to the police, a certain Willich; head of a Communist school in London which was protecting a number of German Communist refugees. Fortunately for the public, ignorant as the public is apt to be of the imminent

[1] *1851 Commissioners' Records.*

dangers to which it is perpetually exposed, it was able to look forward to its approaching festival without too much heartburning. And as time drew near, hardly any but a minority seems to have worried overmuch about the possible consequences. Individual emotions were naturally mixed. Soyer[1] was seen to be full of hope; Sibthorp of despair; and from across the Atlantic the *New York Weekly Herald* gave vent to the kind of observations that are usually associated with *schadenfreude*. It drew attention to the exhibitionism of John Bull and his great London speculation, described him further as "a complacent and conceited personage", and the exhibition on which he was bent was evidently none other than that of himself. It went on to add that a ship would shortly set sail from New York bearing within it the most interesting specimens of philosophy and socialism which any country had ever produced. A deputation of American socialists, filled to capacity with all the combustibles of Red Republicanism, Socialism and Chartism were to take front rank among the agitators concentrated in London.

With all these emotions simmering below the surface it is hardly a matter for surprise to discover that for some time to come relations between the Executive Committee and the Foreign Commissioners were not of the best. The Executive had offended M. Sallandrouze of France by whose attitude they themselves had in turn been profoundly irritated. They were also jealous of the meetings between the Foreign Commissioners and members of the Royal Commission, and resented their complaints, reasonable for the most part and chiefly concerned with questions of re-allocations of space which were eventually conceded. The French Commission, for example, accused the United Kingdom of retaining her own space while reducing that of other countries.

[1] Alexis Soyer, the celebrated chef of the Reform Club. Thackeray introduced him as "Mirobolant" in *Pendennis*.

Dr. Schwartz of Austria insisted that his own country should not exhibit unless certain alterations were made in space arrangements, and to gain his point even went so far as to cancel for a time the arrival of Austrian goods. Eventually, however, the differences were ironed out, and France, Belgium, Austria, the Zollverein and the United States met together in order to re-distribute their spaces. They seem not to have been altogether easy to work with: their goods were in many instances shockingly late in arriving. In some cases, particularly those of France and the United States no notification of what was being contributed had yet been received, nor had entries been submitted for inclusion in the official catalogue.

France had lately been in the grip of Protectionist opposition; some bad feeling had flared up among French exhibitors. One group, disgruntled over alleged ill-treatment in London and the way in which the Exhibition was being run, went so far as to talk, even at the eleventh hour, of giving up all attempt at co-operation and of themselves staging a Universal Exposition in Paris.

As for the Prince Consort, he was driven to the verge of exasperation by the maze of difficulties and obstructions in which he seemed entangled. "Just at present", he was writing to the Dowager Duchess of Coburg,

> "I am more dead than alive from overwork. The opponents of the Exhibition work with might and main to throw all the old women into panic and to drive myself crazy. The strangers, they give out, are certain to commence a thorough revolution here, to murder Victoria and myself, and to proclaim a Red Republic in England; the plague is certain to ensue from the confluence of such vast multitudes, and to swallow up those whom the increased price of everything has not already swept away. For all this I am to be responsible, and against all this I have to make efficient provision."[1]

[1] Martin. *Life of the Prince Consort.* Vol. II, 359.

In such an atmosphere, for some six months or so United Europe was coming into being; a microcosm, but at all events an actuality, and its birth-pangs tormented many systems. Outwardly there might be an appearance of fraternal benevolence, yet the spirit of Cain was not far distant, showing its presence in countless unmistakable signs; suspicions, envy and jealousies. Nationalities already far too self-conscious to sink their identities within an amorphous group of exhibits were on the verge of repudiating their neighbours within a primarily geographical framework. And a prematurely united Italy was constituted beneath the transparent roof of the Exhibition building, with bitter antagonisms between Rome, Tuscany and Sardinia. Spain and Portugal insisted upon defined frontiers, and Belgian territory embarrassed France by a too close proximity.

* * * * *

So far nothing definite had been settled as to the character of the opening on May 1. Among the public a general impression had prevailed—encouraged by the newspapers—that there would be some sort of an official ceremony, performed, it was naturally supposed, by the Queen herself. Even so, by early April no announcement had been made; the Commissioners had been carefully non-commital in either direction. But zero hour was drawing near. So near that a decision would have to be taken one way or another. Then they lost their nerve. With one eye on the intentions of disaffected foreigners, and the other on the realism of Lord John Russell—whose objections to a public ceremony were chiefly based on the uncontrollability of crowds—they arbitrarily decided that the opening should be strictly private, and accordingly advised the Queen.

By the middle of the month it had become clear that their advice was to be taken: the Exhibition was to be opened in private by the Queen, to the exclusion

of all but a handful of officials. This was confirmed by a manifesto sent by the Commissioners to the press, announcing that on May 1 the doors would not be open to the public before 1.0 p.m.

Old Mrs. Villiers followed the proceedings with infinite misgiving in her correspondence with her son:

> "Charles makes me die of laughing with Lord Douro's account of the Duke's interview with Albert on the subject of the Exhibition. The Prince crams him with his opinion of the beauty, harmony, unity and peacefulness of the show and the Duke don't contradict him but always replies by making some suggestion about keeping roads open to facilitate the passage of soldiers. Then Albert says, 'Is it to be believed that upon such an innocent peaceful undertaking as this, there can be found people disposed to be quarrelsome and mischievous?' And the Duke only replies 'It is better to be prepared.' . . . The programme for the foolish thing is settled. 'Gracious Missus' goes in state and will sit on a throne. She is to declare the Exhibition of the World's Fair open. At Bartlemy Fair the Beadles used to give out that the Fair was open, so the idea is not new. Charles says the May Day sweeps ought to petition for compensation or admission, for it is hard to depose the original Queen of the May without other *procés* than Queen Victoria stepping in her place. I hope they will have Lord John as Jack in the Green . . ."[1]

It was a step ill timed and worse advised. Eight thousand holders of season tickets had made arrangements to be present; many were coming up for the occasion from remote parts of the country, chiefly for the purpose of beholding their sovereign, the best exhibit of the lot in the palace of wonders. But, and even more than the inconvenience involved, the new decision was directly interpreted as showing a lack of confidence in the public. Resentment flared up. The papers, which had all along been inclined to suspect the Commissioners' arrangements now subjected them to violent attacks. Letters poured in: of

[1] *Nineteenth-Century Commentary.* By Marjorie Villiers. Quarterly, 1944.

protest, disappointment, dismay; and a chorus of editorial polemics in a variety of keys requested a reversal of the ruling. *The Times* was sensible, majestic and ironical in turn. The Queen, it believed, would be in no greater danger inside the building than outside it. Socialists, whether French or German, who intended attack had no need of entry into the Building in order to carry out their purpose. She was neither Tiberius nor Louis XI that she should be smuggled about under a bodyguard. The safest place for the Queen was where she belonged: in the midst of her loyal subjects. What satisfaction would she indeed obtain by entering a monster warehouse all upholstery and machinery, attended only by a few gold and silver sticks? This would be to turn Queen Victoria into another Lady Godiva, with, doubtless, as much success. The *Daily News*, the *Morning Chronicle*, and the *Globe* noisy and vociferous were equally indignant. Upon one thing all were agreed: that the ruling be reversed, and that the first scene of the great international spectacle should be that of the Queen displayed in the midst of her people. After all, the argument was unanswerable. Lord Granville, who had been out of London for a few days, returned to the full blast of this noisy orchestra. Excitement, annoyance and dissatisfaction were universal. He heard them all repeated from the City to the west-end, and then went straight down to Richmond to discuss the possibility of concessions with Lord John Russell. In his turn the Prime Minister preferred first of all to consult the Prince. At Windsor, where consternation reigned, he found the royal pair ready to consider any practical alternative.

Cole, with his usual resourcefulness in a tight corner, commenting upon the Prince's excuse that ceremonial was, in fact, lacking to warrant the Queen's presence in State, observed that it might be made the occasion of a Report to be presented by the Commissioners on the completion of the work, indicating

BRITANNIA'S GREAT PARTY.

Enter Albert. "Oh! Mum—Please, Mum—Here's a to do! Here's all the Company come, and the Street's full of Carriages and Brooms—and there's such a Row—and the Candles isn't Lighted, nor the Supper Ready, nor the Man dressed who's to wait, nor the Music—nor Nothing."

By courtesy of the Proprietors of *Punch*.

how essential had been the royal sanction to the whole enterprise.

Agitated messages flew backward and forward between Richmond, Windsor and London. Lord John, having given the matter due consideration, now concluded that the order might, after all, be changed, since his chief concern had been the expected pressure of crowds on the route to the Exhibition Building. He was now convinced that the obstruction would not be as great as he had feared. He was all for not alienating public feeling, and was for disregarding fashionable society rather than middle-class interests.

He pressed for the admission of season-ticket holders; on the other hand, overcrowding was to be discouraged.

At last, by April 20, even at so late an hour, it was definitely decided to climb down, to comply with the wish of the nation for a public opening, and a ceremony devised upon the lines thought out by Cole was drawn up.

Even this in principle contained pitfalls. A subject for further discussion arose as to the religious aspect of the opening ceremony. Upon the attitude to be adopted by the Church of England, opinions were, to say the least, at some variance. Some held that the event should be regarded as a matter for public rejoicing, with, in passing, a gesture, a vote of thanks as it were, to Providence for making possible this great universal and humanistic display. These represented, perhaps, the majority. But there were others who, more thoughtfully, looked further than the immediate present, and who on the cloudy horizon apprehensively discerned the consequences of humanism run riot. Scriptural examples were recalled of the fate awaiting excess of pride; worship of human skill, wealth and power as ends in themselves had, it was remembered, invariably provoked Divine retribution upon nations extravagantly swollen with self-confidence. To these a National Fast seemed

apposite in the face of the terrifying advance of unredeemed materialism.

While feelings were so divided a purely religious ceremony was clearly ruled out. It was felt that to make of the occasion a festival such as might have taken place on the continent would be, somehow, out of keeping with that sobriety which distinguished the Church of England. It would have been out of keeping altogether with national feeling. Signs of a distressing character were, even so, not wanting. The general pacifying tendencies of the Great Industrial Exhibition were in danger of misrepresentation, if not of actual perversion; already an official body had exceeded discretion by alluding publicly to the President of the Royal Commission as "the Prince of Peace."

Bearing in mind these shades of public opinion the somewhat elaborate ceremony of inauguration had provided for a specially composed prayer to be pronounced by the Archbishop of Canterbury; it promised to foreshadow all the pomp which had come to be expected from the celebration of a great national spectacle and international event.

After the official announcement there was a boom in season tickets, the sale of which rocketed in four days to 12,000. To stem the rush, prices had to be raised by a guinea, only to be reduced a few days later to the original price, at the Prince's request. The nightmare of overcrowding was a problem which had got to be solved.

* * * * *

But no sooner had the great opening controversy been settled than another, a most unfortunate complication blew up like a squall across the path of the harried Commissioners. It concerned the foreign diplomats. Prince Albert, perfectly aware of the suspicions caused by the liberal aspect of the Exhibition in certain continental circles was above all

anxious for official international representation at the opening ceremony. The senior representative, the Belgian minister, had been accordingly approached with this end in view.

After a meeting of the Commissioners on April 22, Lord Granville had called upon M. van de Weyer, and not finding him at home, had left him an abstract of the programme for the inaugural ceremony in which, as Doyen, he was announced to read an address to the Queen on behalf of the entire diplomatic corps. M. van de Weyer had previously sounded his colleagues individually, and with one exception had secured unanimous approval; the Russian ambassador, Baron Brunnow, had been ostentatiously out when van de Weyer called. The Belgian minister naturally foresaw no objections. He made enquiries about one or two matters of procedure, and summoned his colleagues for a meeting on the following day. They assembled. But the collected diplomats who confronted the Belgian minister on Wednesday, April 23, were in quite a different mood from that in which they had separately agreed with him to the address in principle. Almost to a man they now opposed it, and by a majority vote turned down the proposal. Something had happened meanwhile. Arguments had been used to dissuade them. The whole thing was utterly mysterious and bewildering; but not for long. At the bottom of it all M. van de Weyer suspected Baron Brunnow.

In the meantime Lord Granville, having instructed Mr. Bowring to publish the programme in the Thursday papers unless notified to the contrary, had taken his affable presence out of London for two days and was out of reach.

Van de Weyer went down to the Board of Trade. He interviewed Bowring, he begged for cancellation of the programme. But it was already too late; the document was in proof, and although marked *Private and confidential* had fallen into indiscreet hands. So

in the morning papers of Thursday, April 24, Baron Brunnow read the official programme of the inaugural ceremony during which it was announced that,

> "The Doyen of the Corps Diplomatique will read an Address to Her Majesty on behalf of the Foreign Nations who have contributed to the Exhibition to which Her Majesty will likewise return a Gracious Answer."

The Russian Ambassador promptly sat down and wrote to Lord Palmerston. His letter[1] stated his reasons for inducing his colleagues to rebel against the proposal. The whole affair, to begin with, should have been conducted through the Foreign Office; the Address was against all precedent; the programme was incorrect in stating that any one diplomat could speak for the foreign nations collectively, since accredited ministers were only entitled to speak for their own sovereigns or governments; innovations were above all to be avoided in what concerned diplomatic procedure; and in any case the event itself was purely industrial and bore no relation to politics.

His reasons were sound; the infuriating part of the whole business was that he was right, and Palmerston knew it. Had the affair not been performed irregularly, but conducted instead through the proper channels, the miserable incident would never have occurred. That was the result of the meddling of inexperienced princes.

Granville's return to London was therefore anything but agreeable. He had to explain to Lord Palmerston, who had to account to Lord John Russell, while Lord John in turn wrote rather tartly to the Prince. For when all was said and done the idea of the wretched Address had in the first instance been his. In the interval the air was thick. Recriminations, explanations, apologies and rebukes followed each other in an agitated succession. Brunnow raged, Granville explained, Palmerston fumed and Lord

[1] *1851 Commissioners' Records.*

John scolded. But the Prince, to do him justice, was a man of character. He still and stoutly clung to his view. He maintained the Address to be perfectly admissible, the occasion being not purely English in its nature, but international; that half the building was in charge of foreign authorities; half the collections, half the juries and half the expenses.

M. van de Weyer had left for Windsor to report on these unforeseen developments. He returned the bearer of a message from the Queen herself to his colleagues, the tone of which was mortifying in the extreme. "La Reine a désiré," it read,

> "dans une circonstance exceptionelle, faire au Corps Diplomatique un compliment marqué. Sa Majesté ne peut pas forcer le Corps Diplomatique d'accepter une politesse, qui serait partout ailleurs acceptée comme une faveur."[1]

The Belgian minister administered this snub no doubt with grim satisfaction; he also succeeded in talking round most of his colleagues and procuring a last-minute change of heart. Ashamed and humiliated they confessed to coercion; Brunnow[2] had induced them to believe that they might be disowned by their governments if they took part in the Address. But they were to be humiliated even further. Lord Palmerston had quite decided that the whole affair should be dropped, inconvenient, objectionable and unconstitutional as it was. The diplomats might now indeed still be present at the opening ceremony, but not as actors; as spectators only; to remove all differences and avoid inconvenience in the future.

As for Baron Brunnow, his official justification for his action was that he could not suffer the Russian people to be alluded to in an official address. He had another reason too; one he confided to Palmerston.[3]

[1] Martin. Vol. II, 361.

[2] Aided by Baron Koller, the Austrian Minister.

[3] *1851 Commissioners' Records.*

He did not, he stated, choose to allow the Belgian, or for that matter, any other representative to speak for him, or, consequently, for his Court.

And on this note the curious incident came to a close.

CHAPTER X

SINCE EARLY FEBRUARY, WHEN THE COMMISSIONERS had finally taken possession of the Crystal Palace, there had been a steady intake of British goods. Delivery of the foreign contributions had been less punctual, but by April the early unequal consignments from abroad had swollen from a thin trickle into a substantial flood. Through eight ports of the United Kingdom they were now daily arriving, and London, Liverpool, Hull, Bristol, Newcastle, Folkestone, Dover and Southampton had all been specially set apart for their reception. Goods were labelled direct to the Exhibition Building, exempt from Customs' examination, the authorities having agreed to treat the Crystal Palace in the light of a bonded warehouse.

Day after day down at the docks the cargoes were landed. In the Port of London vessels loomed suddenly out of the grey drizzle, glided slowly alongside, tied up at the wharves and discharged their freights. Beside them the tall derricks swung round, picking inquisitively into the holds, lifting out enormous crates and corded packing cases and dumping them stiffly on to the slimy quays. Slimy they were; slippery with filth, peel and the deposit of harbour refuse. Sticky, too, where by the great sugar houses the coopers mended their broken casks, and pavings oozed with the tarry seepings of molasses.

There would, now and then, be a pause. For a ship to turn round, or when the iron viaduct swung open for the passage of some vessel filled with emigrants, her decks littered with ropes and baggage; passengers in her stern crowding against the rails for a last vision of home.

And then under the eye of the Customs' agents, would come the loading up of crates on to the waiting wagons, and the beginning of the long, slow, stumbling journey from east to west across London. All roads now converged upon Hyde Park. The main streets leading from docks and railway termini were crammed. Heavy wagons stacked with packing-cases bumped slowly over the cobbles, winding through a grim and shapeless labyrinth of slums. But once on the main arterial highway they stuck to the kerbside, lumbering one behind the other like caravans; loaded to the hood except where long teams of horses strained forward drawing some monumental specimen of engineering. Down the centre of the roads rattled the normal traffic: the carts with building materials; the omnibuses, crowded, uncomfortable and ill-sprung, with their complement of miserable passengers.

London was as usual being repaired; the streets were up. Houses and shop-fronts gleamed with paint, and bricklayers were at work. Newspaper placards announced in heavy type the sale of supplements in several languages. From taverns and gin-palaces bunting streamed like ribald laughter; decorations flaunted from upper windows brought gaiety to the shabbier streets. Almost every corner drew an audience: the Punch and Judy show, the tumbler in spangled cotton fleshings, the pole-balancer, and the triangular contortionist.

Hawkers lined the footways with souvenirs of the occasion; bright metal discs, and tinsel mementoes, panoramas and glazed gelatinous views. Stalls and booths were piled with oranges, cocoanuts and pyramids of ginger-beer. In the evening, when the gas-jets flared up in their globes of frosted glass and the shop assistants went out to join the crowds, the sobriety of black bombazine would give way to the ostentations of pink satin.

Alternatives to the Exhibition abounded. The

sights of London were packed with the curious and the indefatigable. Opportunities to visit public buildings were increased, and since foreigners through their own diplomatic representatives were given special facilities for admission to London sights, regulations were relaxed at many of the national institutions. Museums and galleries postponed the holidays of their staffs; admissions were abolished, concessions made this way and that. Noblemen threw open their mansions in the public-spirited hope of interesting and elevating popular taste, and there seems to have been something in the nature of a competition to promote good will, to share pleasure, in fact to show off to best advantage. Almost every building of historic importance round London was besieged with visitors of every description. Sightseers flocked into Westminster Abbey during the peak period at the quite embarrassing rate of six thousand a day. At one time they were filling St. Paul's at six thousand an hour.[1] In fact the boom in sightseeing—the belief is irresistible that the Felix Summerly guide-books had something to do with it—seemed to have broken every existing record in England. Most of the obscurer museums doubled their visitors; prisons, penitentiaries and the London Missionary Museum showed considerable increases in sight-seers as well. On the whole, and herein lay the surprise, behaviour was decent and orderly. Baffled vergers, no doubt, were hard put to it to keep an eye on the crowds in St. Paul's, but there were no serious incidents; never was there any need for the police, and the same could be said at the National Gallery and the British Museum. Behaviour, in fact, seems to have been exemplary. At Bridgwater House, the gallery of which had been thrown open to the public by Lord Ellesmere, there were no complaints. Northumberland House and Sion House were also on view; here, whether having regard to furniture, china or objects

[1] *1st Report of the Royal Commissioners.*

of virtu there were no complaints. Not a flower or a shrub was injured, although the average of daily visitors was about seven thousand.

These were the orthodox pleasures. But there were others, too, more garish and unsophisticated, where decorum might be relaxed and an exuberant early Victorian allow himself more informality.

There was, for instance Batty's Hippodrome, which had been set up opposite the Broad Walk in Kensington, and where equestrian marvels might be seen. In Leicester Square Wyld's Globe and Cantelo's Hydro-Incubator were novelties; no less than seven separate panoramas featured various expanses of the world, and dioramas improved upon them. There was Astley's, and there were music and dancing rooms. Finally there was the wonderful Universal Symposium conducted by none other than the great Mirobolant himself: Alexis Soyer, who succeeded, being one of the most colourful figures of his epoch, in managing to combine a strong commercial instinct with the ubiquity of a *vivandière*. Wherever anything was untoward, a national calamity, a disaster, or more fortunately as was now the case a cause for rejoicing, there was the great Soyer, ready on the spot with his pots and pans, his practical economic stoves and his celebrated dishes. When the potato crop had failed in the 'forties, he had been ready for the emergency with charity soup kitchens for the needy Irish. A little later he would be right on the spot with his field kitchens at Scutari. At the moment, however, here he was, just outside the Exhibition grounds, converting Gore House from the lingering tarnish of romantic disrepute bestowed upon it by the ill-fated Blessington-d'Orsay ménage into what he himself was pleased to describe as his Encampment of all Nations or "Vatican of Gastronomy".

His arrangements had been elaborate and pretentious, if description does not belie them. For the rooms had been redecorated in a multi-national

style; the grounds replanned, and a jumble of statuary, grottoes, ornamental waters, bridges and illuminations installed. Among the *al fresco* ingenuities was the Pré d'Orsay, a table three hundred feet long, covered in by a loggia, where a crowd of attendants and pages in pseudo-renaissance costume waited upon the exhausted guests. At night-time glow-worm lights twinkled in the darkling grottoes and shubberies, while the closer clouds were alleged to be illuminated by "Soyer's mysterious flash of lightning",[1] whatever that may have been. The patrons were, no doubt, thankful to get away from the Kensington Road into the pleasure grounds of Gore House, if only to sit down and rest for a while. It was usually a quiet approach with little to disturb it. Now there were crowds, omnibuses and cabs; there was heat, noise and dust. Everywhere there were stalls and dogs and trumpets and whistles. The place was full of policemen and rowdies, pot-boys and pugilists, quarrels, cat-calls and resounding scraps.

* * * *

The speed at which Fox and Henderson had eventually worked had in the end exceeded both hopes and estimates: ventilation had had to be increased; galleries doubled; all kinds of unexpected and unprovided for details had cropped up, and the cost of the Building, on the agreed use and waste terms, brought the total outlay to £107,780 7s. 6d., an excess of some £35,000 over the agreed amount. This loss was incurred by the contractors, though the Commissioners, after some grumbling, refunded them in view of the exceptional circumstances under which they had worked.

But since they had finished the main part of construction, the Crystal Palace had been in the hands of the interior decorators, and Owen Jones' choice of primary colours, blue, red, and yellow, had been used

[1] *The Times*, May, 1851.

with effect, and was in fact still being applied by painters to the ironwork until the very eve of the opening. The columns were variegated with a yellow stripe, and the effect of it all was light and gay, although *The Times* for a moment had qualms lest it all might develop into "a huge vulgarity".[1]

Then, as April drew out into lighter evenings, activity became intense. Over and above the final preparations made by the contractors, there was the business of putting up seats in tiers all round the central aisle to accommodate some five thousand spectators, and there was the huge expanse of shining roof to be covered with miles of calico sunblind to soften the glare, cool the heat and protect the exhibits. Then the stalls were being lined with Turkey cloth of a strong, warm red, repeated again in the draperies festooning the gallery railings.

There were, too, the frenzied activities of the exhibitors. The British Division, which had succeeded in shepherding into its fold some twenty thousand deliveries before the opening day, was after all on home ground. But many other countries were not so well forward; and although the Zollverein, Austria, Switzerland, Holland, the North German States, the United States, Spain, Italy, Tunis and China were fairly well advanced, France was in arrears, Belgium and Turkey far behind, and Russia backward though now making up for earlier delay. All were rummaging among a thousand half empty packing-cases.

At the western end of the building the steam-engines were already in position; white wreaths hissed from their funnels, drifting slowly outward into the fresh spring air. The railway exhibits were dominated by "the huge broad gauge locomotive, 'The Lord of the Isles', which, high upon its stand, threw the narrow gauge engines into the shade of insignificance."[2]

[1] *The Times* was not the only objector. Owen Jones felt obliged to justify his choice before the members of the R.I.B.A.

[2] *The Brunels: Father and Son.* By Celia Brunel Noble.

Outside the western entrance of the Nave, among a chaos of raw material, rose monoliths, blocks of granite, enormous anchors too heavy to move; a scene primeval, unfinished, yet suggestive of creative energy.

Foreigners could be easily identified: there were crowds of them already; and the beard of the boulevardier was to the average Englishman as distasteful a sight as the fez of the Levant. Yet before the summer would be over, felt hats, pantaloons and variegated cravats would become routine sights. London was rapidly filling, prices were extortionate; strange features, strange complexions and stranger head-wear gave a delicious sense of uncertainty, a pleasant illusion of danger.

The Park was of course the focal centre. Behind the building, in Rotten Row, horsemen thudded along the soft dry tanning, throwing up clods as they cantered by. In front of it crept a regular, an interminable line of carriages. Behind these were the railings, and beyond them were crowds perpetually watching the workmen now on their last lap. Ladders still sloped against the sides of the Crystal Palace, where the painters touched up the moulds and iron crestings with brush-loads of that primitive blue and yellow which was giving *The Times* such apprehension. On the ground floor the exterior of the building was enclosed with boarding in between its 24-foot iron columns; on the upper storeys this was done by glazed sashes. Each storey of the building was decorated with a cornice and a cresting ornament, and each of the iron columns continued above the roof as a separate flagstaff from which was to be flown the flag of one of the exhibiting nations. Looking higher the tiny figures could be made out which still, and delicately, picked their way over the glass roof of the glimmering Transept, which rose magnificently above the surrounding trees. Enthusiasts pressing forward were oblivious of all else; even of

the disgraceful neglect of this part of Hyde Park which was in such a disgusting condition. The stretch from Albert Gate to the eastern entrance of the Crystal Palace was an unbroken succession of public nuisances. One side of the carriage way was bordered by a deep open ditch filled with mud and filth; on the other a clumsy wooden rail, the only barrier against the expected pressure of heavy crowds, was rotting into decay. Footpaths were dangerous, needing repair. And Knightsbridge architecture from the rear was in poor shape to overlook a State procession. Meat safes, hoardings and mouldering timber made it ideal as a playground for prowling cats, and strips of ground contained every sort of rubbish; bones, rags, tins, orange peel, old newspapers and filth in general. Over and above it all was wafted the powerful stench of ammonia exuded by the Barrack stables.

* * * * *

Prodigious results had been achieved by harmonious co-operation between the three members of the Executive Committee; since the disappearance of their more inactive colleagues they had worked smoothly and intensively, often, as time drew near the opening, on a twelve-hour day. But now that the spade-work with all its drudgery came to an end and the treasure appeared glittering at last, Drew and Fuller, absentees since their first desultory pursuit of subscriptions, now turned up again, anxious for a share in the glory ahead.

Colonel Reid had received them with a somewhat chilly courtesy and offered them a room in the office. At this Cole and Dilke had flared up, declaring that it was impossible for four people who detested each other so strongly to work in harmony, and, having accused them of spying on behalf of the Mundays, refused summarily to work with them. The facts appear to have been that the Mundays were dissatisfied with the award made by the arbitrators, and

had delayed the proceedings as long as possible, hoping no doubt to renew their claim of expected profits once the exhibition was under way. Drew, as their nominee, was certainly superfluous; Fuller a trifle discredited, and by now very disgruntled.

Henry Cole, on the other hand, had been getting through a tremendous amount of work. A thousand heterogeneous and seemingly disconnected duties had come his way. There had been, for example, the introduction to the catalogue to write, and the matter of the Press representatives whom there had, for a moment, been talk of excluding from the opening ceremony. This reactionary step he had fought tooth and nail, impressing the importance of press reports of the Exhibition, and pleading with the Commissioners to reverse their decision. "Alas," one of them had cried despairingly, "we are a Press-ridden people,"[1] but he had given way. And Granville had consented to the admission of an artist from the *Illustrated London News* to make drawings of the various stages of development from start to completion.

All the foreign countries were sending over special reporters, of which, for example, Austria alone had appointed twenty-four; specialists in the arts and sciences. France and Prussia were doing the same with men of even greater standing; Jules Janin's[2] rather trite effusions in the *Journal des Débats* were accounted classics of French journalism, and Michel Chevalier was sent by the same paper.

Playfair suggested an official report to enquire into the state of world industry revealed by the Exhibition, and proposed the appointment of a reporter to each of the thirty juries.

* * * * *

Preparations for the Opening were on a scale commensurate with all else connected with the history

[1] Cole. *Fifty Years of Public Work.*

[2] Janin mistook the Transept elms for oaks, of which he described one as "un chêne seculaire, contemporain de la reine Élisabeth."

of the Great Industrial Exhibition: among other plans it was proposed to celebrate the inauguration with the help of a monster choral society, an idea by no means to everybody's taste. To Lord Granville for example it seemed as though some things might stand in danger of being a little overdone: "It might be worth thinking of later in the year," he commented icily in a letter to a colleague,[1] "but in the first instance it would look like crowding all possible attractions into a Charity Breakfast . . . and those who have paid 3 gns for admission on the First Day would probably object to so many hundreds getting in literally for a song."

He was overruled. The musical side of the inauguration was in the hands of Sir Henry Bishop, Sir George Smart, Sterndale Bennett, and Dr. Wylde. And they were careful not to err through neglect of their duties. They enlisted eight singers from Her Majesty's Theatre, among which were Sims Reeves and the adored Lablache; nine more from the Italian Opera House; some seventy or so professional and amateur singers, the choirs of St. Paul's Cathedral, Westminster Abbey, St. George's Chapel and the Chapel Royal. The Sacred Harmonic Society. Nine Organs and Organists; two military bands, and nine State Trumpeters.

A total complement of eight hundred and twenty-nine musicians in all.

* * * * *

The scene outside the Exhibition Building now resembled something between an engineering shop, a vast studio and a bazaar. One after another the statues were being heaved into position, draperies hung, and models of engineering installed. To the staccato echo of hammers and the hiss of steam small groups of distinguished visitors moved about among the litter and refuse of crates, wandering in and out

[1] *1851 Commissioners' Records.*

of the scaffolding, circumventing ladders, poking their noses in and out of all the work in progress. Under the vault of the Transept important figures dwindled into insignificance, like bees lost in the immensity of a huge and airy hive.

There had been the usual abuses. Indignant accusations had been inevitable, and in the taverns of Knightsbridge certain reprehensible persons had been discovered trafficking in forged workmen's tickets; the unauthorised and unprincipled had been enabled to slip into precincts inaccessible even to the Executive Committee, under cover of being mechanics, or assistants. As for the Queen, she herself had made at least eight preliminary tours of inspection, causing consequent delays in progress. Cole,[1] in his diary, confirms this under an entry for April 7:

> "Queen and Prince came. Mr. Fox rather sore. He said their visits excited the workmen and exhibitors so much, that each visit cost him £20 in loss of time."

Even at this late hour the Exhibition baiters were loth to abandon their sport. Colonel Sibthorp had a final outburst when, according to one press report of a Drury Lane meeting, he reverted dramatically to the question of the Great Exhibition, characterising it as a combination of foreigners to rob his countrymen of their rights and freedom: "*They would have all their food robbed;* they would have a pie-bald generation, half black and half white, but he could assure them that his arm at least would be raised to prevent such a violation . . . *They might look for assassination, for being stabbed in the dark*, but careless of that, he was determined to pursue an even and straightforward course, and he would say that the dearest wish of his heart was that that confounded building called the Crystal Palace might be dashed to pieces."

There was a last-minute attempt to start a new alarm, false like its predecessors, but equally intent on sabotaging two years of heroic effort. It was

[1] Cole: *Fifty Years of Public Work.* Vol. I, 176.

alleged, by precisely who it is unknown, that the three large trees roofed in by the cylindrical Transept were becoming the resort of countless sparrows; that they had already humiliated a number of statues, were ruining some valuable exhibits, had anointed the Prince Consort and a few elder statesmen, and that the person of the Queen herself might not be immune. It was, to say the least, a disquieting prospect for the Commissioners, for having outlived attacks upon its principles, the Exhibition now seemed to be in danger of succumbing to ridicule.

The England of 1851 was, as far as humour went, not very much different from what it is to-day. The bubble was pricked by a satirical article in a provincial journal which[1] appeared a few days before the State opening, the origin, presumably, of a well-known but apocryphal story:

> "The Prince Consort was in the breakfast room at Buckingham Palace, moody and unhappy, when the Queen asked the cause of his woe. He explained that after innumerable difficulties had been removed, the sparrows had appeared in such numbers in the Exhibition as to destroy all hope of displaying valuable goods. The Queen then asked whether the Prince Consort had consulted Playfair, and was assured that he had no advice to offer. Thereupon she suggested that Lord John Russell should be sent for. On his arrival at Buckingham Palace the Prince Consort explained the difficulties in regard to the sparrows, and his Lordship at once suggested that Her Majesty's Guards should be sent into the Building to shoot them. The Prince pointed out that this was an unpractical suggestion, as the result must be that the palace of glass must be destroyed. Lord John Russell then suggested that Lord Palmerston should be called into consultation. When that great statesman arrived he smiled at the difficulty, and proposed that bird lime should be put on the branches of the trees. The Prince Consort observed that this proposal was equally useless, because the sparrows no longer roosted in the trees, but

[1] According to Playfair, *Memoirs*. VI, 119.

preferred sitting on the girders of the building. Lord John Russell and Lord Palmerston now withdrew for a consultation, and finally recommended that the Duke of Wellington should be summoned . . ."

"The Iron Duke was amazed at being summoned for such an object, and wrote the following letter:—

'Field Marshal the Duke of Wellington presents his humble duty to Her Majesty. The Duke of Wellington has the honour to be the Commander-in-Chief to Her Majesty's Forces, but the Duke of Wellington is not a bird-catcher.'

"The Duke had no sooner sent the letter than he repented, and mounting his horse, overtook the messenger, and, taking back his letter, presented himself at Buckingham Palace. The Queen received him with effusion, and the Prince Consort recovered from his despondency. The three Privy Councillors withdrew for a consultation, and on their return the Duke of Wellington oracularly uttered the word 'Sparrowhawks'."

* * * * *

Two days before the ceremonial opening the Queen had spent a long time in the Exhibition Building seeing everything, and, no doubt, adding to the perplexities of Mr. Fox. In her diary that evening she noted that she had returned home—

"quite beaten, and my head bewildered, from the myriads of beautiful and wonderful things which now quite dazzle one's eyes ! Such efforts have been made, and our people have shown such taste in their manufactures ! All owing to this great Exhibition and to Albert—*all to him !* We went up into the gallery, and the sight from there, with the numerous courts full of all sorts of objects of art, manufactures, etc., is quite marvellous. The noise was overpowering, for so much was going on everywhere, and from twelve to twenty thousand people engaged in arranging all sorts of things." [1]

The Prince's entry is less enthusiastic—

"Terrible trouble with the arrangements for the opening."[2]

[1] Cole : *Fifty Years of Public Work.* Vol. I, 176.
[2] Martin. Vol. II, 362.

A last preview followed. This time accompanied by the Prince and Princess of Prussia who had at length arrived safely at Buckingham Palace only the day before. The journey round the galleries was made all over again, and they were in the Queen's words "thunderstruck". All was noise, excitement, and the sense of final preparation. The fountains were playing; tubs were in place; plants, pots and palms being moved into position. Stockmar had arrived; so had the Duke of Cambridge, fresh from Ireland and full, like so many more, of apprehension. Only Victoria seems to have been sanguine, upheld as she was by those three attributes of priceless worth: her complete self-assurance, her conviction of the exclusive *rôle* of Britain in the affairs of the world; and lastly, and perhaps most important of all, her faith in her people. Characteristics so easily attacked in private individuals as complacency, so precious in rulers as their contribution to national self-confidence.

She had been assaulted in the past by the crazy or the grudging. She would be attacked again in the course of her long reign, but never for a moment did she conceive of being daunted by the fear of attempts upon her life. Duty was duty, and perhaps, after all the speculation and comment in the papers, the nervous fears of the continental royalties, and the vacillation of the Commissioners, the issue was best comprehended by *Punch*, which in its shrewd and casual English way came probably nearest a true estimate of the situation in its own private version of *The May Queen :*

"You must see they call me early—call me early, that's a dear !
Tomorrow will be the least of a joke of all days in the year.
No doubt 'twill go off well, love—but still 'tis a trying day;
For I am the Queen, and it's May, my dear; I am the Queen and it's May.

"I'll go through it without a sigh, love, for your sake and for mine;
But, oh, how happy I shall be when we get home to dine!
I hope they'll have it over soon, and let us get away;
For I am the Queen, and it's May, my dear; I am the Queen, and it's May.

. . . . . .

"The carts still come and go, I hear, into the house of Glass;
And the helpless folks in Knightsbridge, they grumble as they pass;
But of course, dear, all must be ready, or what will the people say?
For I am the Queen, and it's May, my dear; I am the Queen and it's May.

"I haven't the least doubt, love, there'll be no behaving ill;
That they'll cheer us, as usual, down Constitution Hill;
That for rich and poor alike, 'twill be a merry-making day;
For I am the Queen, and it's May, my dear; I am the Queen, and it's May.

"So you'll see they call me early—call me early, that's a dear!
Tomorrow will be a triumph for you, love, never fear;
But still you know it's sure to be a very fatiguing day
For I am the Queen, and it's May, my dear, I am the Queen and it's May."

An admirable note on which to allay fears, laugh off hesitations and present the Sovereign as, indeed, she was: a sensible, courageous, responsible, artless and rather dogmatic young Queen, with whose onerous duties and obligations it might be permissible to sympathise, but whose mandate to fulfil them was beyond dispute.

The character of Queen Victoria—so contradictory in its assertive strength and its clinging femininity; its reluctance to control the emotions and its insistence

upon controlling affairs—contained an unexpected fibre of incalculable worth to the nation, if possibly a doubtful asset in domestic life.

Moulded by an adored hand at an impressionable age, she had absorbed some of her husband's qualities, adding them to virtues of her own. Her greatest pleasure was to see him shine in public, to know his talents appreciated by the country. All the same, crossing her idolising comments, often so flamboyantly expressed, there is an underlying egotism, reflecting an inner, tougher streak born of insensitiveness. It made her insensitive to his intellectual solitude; incapable of giving out those subtler forms of imaginative tenderness and delicacy of feeling. Insensitive to all but an intense, a primitive, rather spectacular devotion, she was able to see only through his eyes. After all "*Er der Herrlichste von allem*" is the accepted keynote of the age.

On the eve of the opening day her Journal continued its detailed recapitulation. "Everybody", she wrote,

> "is occupied with the great day of to-morrow, and my poor Albert is terribly fagged. All day long some question or other, some little difficulty or hitch, all of which he took with the greatest quiet and good temper. Great as is his triumph, glorious as is his name, he never says a word about it; but labours to the last, feeling quietly satisfied in the country's glory, and in having gone on steadily in spite of the immense difficulties and opposition."[1]

If there should seem something essentially prosaic about this entry, the Journal at least was private. The newspapers on the other hand were in rhapsodies. Visualising the Queen in the Crystal Palace, they were quick to seize the opportunity: Titania was in her bower of fairy fretwork, Oberon beside her, and his elves were ministering to her slightest whim. The analogy was exquisite.

[1] Martin. Vol. II, 362.

PART III

THE EXHIBITION

"I dreamt I was
Within a temple made of glass,
In which there were more images
Of gold standing in sundry stages,
In more rich tabernacles
And with jewels more pinnacles,
And more curious portraitures,
And quaint manner of figures
Of gold work than I saw ever.

* * *

Then saw I stand on either side
Straight down to the doors wide
From the dais many a pillar
Of metal that shone out full clear.

* * *

Then gan I look about and see
That there came ent'ring in the hall
A right great company withal,
And that of sundry regions
Of all kinds of conditions
That dwell in earth beneath the moon,
Poor and rich.

* * *

Such a great congregation
Of folks as I saw roam about,
Some within and some without,
Was never seen nor shall be no more!

CHAUCER
House of Fame.

CHAPTER XI

MAY-DAY HAD BEEN DECLARED A PUBLIC HOLIDAY. Soon after six o'clock early exhibitors left their lodgings and made their way through the empty streets to the Crystal Palace. Here with their assistants a final burst of competitive energy set them dusting and polishing their goods before the approach of the first visitors.

At half-past eight these too were arriving. They poured in through the three main entrances as the doors opened, and by ten o'clock had filled every available seat. The Transept, galleries and naves were banked with faces; tier upon tier of bonnets in straw, muslin and silk; tall cylindrical hats; uniforms and decorations. But the chief effect, that shock, as Playfair called it[1] of delighted surprise

> "which everyone felt on first entering the great Transept of Paxton's building, was a sensation as novel as it was deep. Its vastness was measured by the two huge elms, two of the giants of the Park, which rose far into the air with all their wealth of foliage . . . The plash of fountains, the luxuriance of tropical foliage, the play of colours from the choicest flowers, carried on into the vistas of the nave by the rich dyes of carpets and stuffs from the costliest looms, were enough to fill eye and mind with a pleasure never to be forgotten, even without the vague sense of what lay beyond . . ."

The day was brilliant. Chilly at first, with a nip in the air. But once inside, in the limpid atmosphere of that great conservatory, there appeared the serenity of perpetual summer, an illusion heightened by the sight of Mr. Osler's Crystal Fountain throwing—right

[1] Wemyss Reid : *Memoirs and Correspondence of Lyon Playfair.* XLII, 363.

in the centre of the Transept—its glittering jets of water like a pattern of lacework up into the transparent firmament. Everywhere an extraordinary luminosity was diffused by the unrestricted light and air and space. This and the iridescence filtering through the glass roof, the haze of distance and the warm tones of the primary colour scheme contributed to an overpowering effect of dimension and majesty.

The scene is familiar through prints; so much so that perhaps we are inclined to take for granted the effect of that early Crystal Palace upon its contemporaries. Here, where Osler's Fountain threw up its airy, slow-motion of spray, was the centre of all the proceedings. Around it stood the statues, dead-white against the strong, Turkey-red draperies: equestrian, pseudo-classical, heroic, scriptural, moralising, and mythological groups, sentimentalising reality to a degree never before achieved. Facing the fountain, in the northern wing of the Transept, stood the royal dais under a canopy adorned with a golden cornice and fringes, and covered with a great carpet worked in Berlin wool for the Queen by one hundred and fifty loyal, skilful and devoted ladies. Then more statues. Tall, trembling palms. Flowers, greenery and the wrought-iron gates, all overshadowed by the twin elms towering up in in their full summer leaf to the girders and timbers of the curvilinear glass roof, giving the exotic scene the air of an elaborate *fête galante* from a French fairy-tale. So strange a sight yet withal so familiar, rising sublimely into the atmosphere like captives; noble, mysterious and alien.

To east and west of the central fountain, away into the hazy distance stretched the naves, a row of trophies, statues and giant scientific instruments running down their centre. Beyond them aisles, seats and the waiting spectators, cordoned off on either hand.

Above, again, in the galleries was a mass of heads; higher still swung the textiles, carpets, rugs and

Victoria and Albert Museum

THE INDIAN SECTION

tapestries, and everywhere the fountains flashed their liquid fireworks in the soft and translucent air. But above the entire scene, long, ribbed and level, stretched the transparent roof under its pale summer awning, its curious construction seeming like a fantasy to the imaginations of 1851; casting a long yet insubstantial shadow a full century ahead, and containing within its ferro-vitreous exterior a world of possibilities.

Presently the enforced monotony of waiting was enlivened by celebrities; national figures were greeted with applause as they drifted down the aisles to their places. An ovation for the Duke of Wellington, bent, stooping and frosted with age followed him up to the gallery from where he could watch the event concerning which he had formerly felt such misgivings. And old Lord Anglesey limped in; he, it was recollected, had lost a leg at Waterloo, and had since had differences with the Duke. Then a cheer went up for Lablache, forging his way massively through the crowd, closely followed by Lord Palmerston. It was diverting to see the Secretary of State for Foreign Affairs, *persona non grata* in this apotheosis of Free Trade and international good will, slinking in, deliberately yet as unostentatiously as possible under the flamboyant wing of a popular opera singer.

There were the assembled diplomats, humbled in spirit though gorgeous in apparel. Officers of State like pouter pigeons shone with gold lace and decorations. The ministers were in court dress; the ambassadors in blue and silver, green and gold, or the old Imperial white, laden with orders. There were court suits of chocolate colour with filigree buttons, and the ceremonial waistcoats of an earlier age, long, white, and of embroidered silk. The Gentlemen-at-arms were present in golden helmets with cataracts of white plumage. Beefeaters were at the gates: so were heralds in tabards; the state trumpeters in gold coats and black velvet jockey caps;

civic dignitaries, Garter-King-at-Arms, and then the soberer, more functional element: the sappers and miners. Around them all, and, as it seemed, fringing the spectacle at once so florid and unexpected, stood the dark blue guardian line of the police.

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From her windows in Knightsbridge the occupant of Old Kent House surveyed the scene with disapproval and foreboding. "The Horrid Day", she dated her letters that morning, while she sat at home wondering what disasters might not be in store for those adventurous members of her family who had gone off to Hyde Park.

The crowd of the 'fifties was the sort of gathering that might be composed by mixing together a collection of types from the earlier volumes of *Punch*. They were dressed in pea jackets, flannel jackets, polka jackets and smocks. The men were in beaver hats, the women in triangular shawls pointing low down the back over voluminous skirts. Bonnets were large, and jutted forward so far that faces were hidden in profile as though by blinkers. Colours were sober; outlines sedate.

At Prince's Gate the crowd was particularly dense, yet too near the great building to obtain anything like a proper view of its frontage or gain much more than an interrupted impression of its dimensions. Here, where the façade rose sheer from the verge of Rotten Row, partly obscured by trees and with no space across which to measure its proportions, London urchins swarmed in the chestnut branches. The ideal point of vantage was, however, the Serpentine itself, upon which the *Prince of Wales*, a miniature frigate, lay at anchor. As the hour drew near for the Queen's arrival, the police cleared the roadway and pressure was intense. There were countrymen and artisans, women with babies, and swells wearing the new registered paletots; older men still wore nankeen

gaiters and epaulets. Hawkers yelling hoarsely were passing off panoramic views reprinted from the Coronation, and programmes of the State procession. There were vendors of all kinds, acrobats and entertainers; and the lamp-black features of the nigger minstrel were as unconvincing as his fuzzy wig and his clacking, unmanageable "bones".

Throughout most of London, shopkeepers had put up their shutters, and having no customers had gone off to see the show. Omnibuses were plying in one direction, all placarded "To the Exhibition", with new reins and rosettes on their horses, and buttonholes and streamers in the coats and whips of the drivers. From every quarter of London they were arriving, each with their distinctive names, " Paragon" and "Waterloo", "Atlas" and "Camberwell". There were the almost defunct Shillibeers and the new improved Franklinskis. For mass transport was still in its infancy, and the one thing the public seems to have wanted was to get away from its neighbour. Franklinski's omnibus was a determined attempt to solve the problem.

But there were also excursion vans, ancestors of the *char-à-banc*, affairs of curtains, looped back in summertime, and on this day of days festooned with evergreens and filled with holiday-makers; a table down the centre and a barrel at the end. For the rest London appeared empty. Here and there a solitary Jack-in-the-Green greeted May-day with his pan-pipes, ringing his bells, thumping his drum at a deserted corner, but there were no children to watch him; they had all gone off to a braver, larger, more impressive spectacle.

* * * * *

Thackeray greeted the occasion with a lengthy, pompous and uninspiring Ode printed in *The Times* on the great morning, but one cannot resist the conviction that Tennyson would have done it better.

It was in any case a public event that did not lend itself to verse so much as to prose.

"Now, punctual to the month and the day, the vast work is complete in all its noble symmetry," declared the *Morning Chronicle* in awestruck tones. "It is probable that no other people in the world could have achieved such a marvel of constructive skill within so brief a period. It is to our wonderful industrial discipline—our consummately arranged organisation of toil, and our habit of division of labour—that we owe all the triumph."

Our wonderful industrial discipline: the words have a familiar sound. All the same in 1851 they were true enough; the sentiments of the *Morning Chronicle*, far from reflecting an attitude of empty boastfulness, were indeed regarded as natural, and, taken for granted.

At twenty minutes to twelve the royal party, in nine carriages, swept out of the gates of Buckingham Palace and turned up Constitution Hill to the jingling accompaniment of the Household Cavalry, and the acclamation of dense crowds. In the last of these, a dress carriage, sat the Queen, the Princess Royal, the Prince of Wales and the Prince Consort. As they drove forward under the developing summer foliage of over-arching trees, backed by the undulations of Green Park, there were a few moments of dark cloud; some drops of rain. But the threat passed, the summer day returned and the procession converged upon Hyde Park at a point where immense crowds streamed along from the City and West-end toward the same objective. Every landmark had become an observation post. From St. George's Hospital, Apsley House and Grosvenor Place spectators bloomed like window-boxes.

Just before noon the royal carriage drummed up Rotten Row, with its escort trotting behind it, flashed past the northern entrance of the Crystal Palace, and after a short pause the silver trumpets announced the

HER MAJESTY

as she appeared on the First of May, surrounded by "Horrible Conspirators and Assassins."

By courtesy of the Proprietors of *Punch*.

Queen's arrival. On the summit of the Transept the Royal Standard was hoist by a solitary sapper.

Inside, the ceremonial iron gates were flung back by Yeomen of the Guard, as before the assembly, to an uproar of welcome, under the perennial benevolence of the elms, and preceded backward by ushers and chamberlains, the Royal Family came into view. Prince Albert leading the Princess Royal, the Queen leading the Prince of Wales. In her Journal that evening she recorded in her own characteristic fashion a precise account of the whole proceeding.

> "The glimpse of the transept through the iron gates, the waving palms, flowers, statues, myriads of people filling the galleries and seats around, with the flourish of trumpets as we entered, gave us a sensation which I can never forget, and I felt much moved. We went for a moment to a little side room, where we left our shawls, and where we found Mama and Mary[1] and outside which were standing the other Princes. In a few seconds we proceeded, Albert leading me, having Vicky at his hand, and Bertie holding mine. The sight, as we came to the middle, where the steps and chair (which I did *not* sit on) were placed, with the beautiful Crystal Fountain just in front of it—was magical—so vast, so glorious, so touching. One felt,—as so many did whom I have since spoken to—filled with devotion—more so than by any service I have ever heard. The tremendous cheers, the joy expressed in every face, the immensity of the building, the mixture of palms, flowers, trees, statues, fountains,—the organ (with 200 instruments and 600 voices, which sounded like nothing), and my beloved husband, the author of this 'Peace Festival', which united the industry of all Nations of the Earth,—all this was moving indeed, and it was and is a day to live for ever."

And then followed the spontaneous, the now famous invocation,

> "God bless my dearest Albert, God bless my dearest country, which has shown itself so great today. One felt so grateful to the great God, who seemed to pervade all and to bless all !"

[1] Princess Teck.

The last bars of the National Anthem died away across the aisles. The choristers in their white surplices laid down their anthem sheets, and, to the diapasons of the multiple organs still reverberating through the building the Prince Consort came down from the dais, placed himself at the head of the Royal Commissioners, and read aloud their report addressed to the Queen; a recapitulation of the labours of the organisers which concluded with words which reflect the Prince's own aims:

> "It is our heartfelt prayer that this undertaking, which has for its end the promotion of all branches of human industry, and the strengthening of the bonds of peace and friendship among all nations of the earth, may, by the blessing of Divine Providence, conduce to the welfare of your Majesty's people, and be long remembered among the brightest circumstances of your Majesty's peaceful and happy reign."[1]

Watching the small figure in pink watered silk brocaded with silver, with diamonds in her hair, the Garter ribbon and armlet, her two children at her side, "No one", wrote an eye-witness,[2] "with even ordinary feeling could remain unmoved" as the clear bell-like voice recited its short, appropriate reply. An inexpressible candour, a directness, a determination, seemed to emanate from the youthful figure and to ignite the audience with mass enthusiasm.

Then it was the turn of the Archbishop of Canterbury, in his tight curling wig and full lawn sleeves, to invoke the blessing of Heaven upon the enterprise. Reading this prayer today it appears singularly characteristic of the age, the outlook and the spirit of those times. There seems to be reflected in that rather complacent utterance much, indeed, of the conviction of a people rooted in security who had come to assume after centuries of uninterrupted development, the very special dispensation of an English Providence for Englishmen in particular.

[1] *First Report of the Commissioners for the Exhibition of* 1851.
[2] Minton papers.

Even in its very acknowledgment of blessings received there had crept in a note almost of defiance which rang through its sanctimony and came gloriously near to cant: "We acknowledge, O Lord," cried Dr. Sumner,

> "We acknowledge, O Lord, that Thou hast multiplied on us blessings which Thou mightest most justly have withheld . . . that it is not because of works of righteousness which we have done, but because of Thy great mercy, that we are permitted to come before Thee with the voice of thanksgiving . . ."

It is the prayer of a people still strong in their self-assurance and convinced of their mission.

> "Of Thee it cometh that violence is not heard in our land, wasting nor destruction within its borders. It is of Thee, O Lord, that nation does not lift up sword against nation, nor learn war any more; it is of Thee that peace is within our walls and plenteousness within our palaces; it is of Thee that men go to and fro in safety, and knowledge is increased throughout the world for the Spirit of Man is from Thee, and the inspiration of the Almighty giveth him understanding . . . Whilst we survey the works of art and industry which surround us, let not our hearts be lifted up that we forget the Lord our God, as if our own power or the might of our own hands had gotten us this wealth . . . Both riches and honour come of Thee, and Thou reignest over all; and in Thine hand it is to make great and to give strength unto all . . ."

It is the prayer of a successful people. A people who could remember no war on their own soil, no famine, no revolution, no social upheaval of any magnitude. Nothing, at any rate, comparable with those which had been taking place within living memory on the continent. Nothing but progress, change and expansion; liberal laws and increasing prosperity.

In all but its sacramental nature, then, the scene bade fair to outdo the magnificence of the Coronation in spectacular display. With the ending of the Archbishop's invocation there came a hushed pause. Then

the massed choirs burst into the Hallelujah chorus, a paean so suited to moods of national exultation. Yet it would have been no England if, into the solemnities of the moment there had not crept another element; light, sparkling, almost Gilbertian. A touch of unexpected humour.

Among the assembly of foreign officials and functionaries who had been chatting desultorily in small groups as they waited for the Queen's arrival, spectators had noticed with a good deal of curiosity a mysterious figure, a Chinese, robed in satin, who moved about among the uniforms, silently for he spoke to no one, yet completely at ease. It was assumed that he must be someone of consequence, probably a mandarin; the sight of him shaking hands with the Duke of Wellington and Lord Anglesey gave convincing support to this theory. But it was altogether mysterious since China had given no official support to the Exhibition and sent no representative to the opening. The distinguished visitor seemed to be attached to no one. But during the Hallelujah Chorus, while the procession was forming up into line he was suddenly seen to cause a commotion, to push his way through the crowd to the front of the stage, and before the throne itself to fall forward, prostrate, repeatedly bowing to the Queen.

It was quite out of order; it caused the exchange of official glances, signs of dismay. It was the Queen who put matters right. With superb tact but an ill-controlled smile she gave orders that he should be included in the procession, to represent, as it might be, the Celestial Empire. And so he was. He was made to walk behind the ambassadors, and next to the Duke of Wellington.

Off they went, to the "War March of the Priests", from *Athalie*, on a procession of considerable length; so long that it took three quarters of an hour to tour the two main aisles and the Transept, leaving the rest of the building unexplored. From end to end the

organs were inaudible. Not so the military bands which blared marches and Meyerbeer throughout the Transept and aisles from one echoing bay to the next.

"Come along, Anglesea, lean upon me!!"

By courtesy of the Proprietors of *Punch*.

Heading the procession, close on the four Pursuivants of Arms, walked Paxton, flanked by Mr. Fox and Mr. Henderson and followed by sundry officials and the Executive Committee. Cole, after some radical heart-searching, had decided to come in a Court suit; Cobden, though a Commissioner, had flatly refused to do so.

Next in turn came the Foreign Commissioners, the Royal Commissioners and the scarlet-faced diplomats, who trooped past the dais "as mute as fish" according to M. van de Weyer. The heads of the Services followed, and now came the affecting moment when the Duke of Wellington offered his arm to his lame old antagonist Lord Anglesey; a sight to touch all hearts. Palmerston, who was close behind them, noted that the old Duke "was accompanied by an incessant running fire of applause from the men, and waving of handkerchiefs and kissing of hands from the women"[1] who lined the long walk round the main avenues of the building. They were followed by the heads of government departments and the great officers of State.

Then came the Prince Consort, the author of it all; calm and modest, surveying the harvest of his work, with the Queen, the Princess Royal in white satin and crowned with wild roses, and the Prince of Wales in a little kilt.

After them came other members of the Royal Family, and with them foreign royalties: princes of Prussia, of the Netherlands, and of Saxe-Weimar; they and their suites brought the amazing procession to an end. "It was a magnificent lesson for foreigners," was *Punch's* sharp comment,

> "and especially for the Prussian Princes, who cannot stir abroad without an armed escort—to see how securely and confidently a young female Sovereign and her family could walk in the closest possible contact, near enough to be touched by almost everyone . . . Here was a splendid example of that real freedom on the one hand, and perfect security on the other, which are the result of our constitutional monarchy, and which all the despotism and republicanism of the world cannot obtain elsewhere, let them go on as long as they may, executing each other in the name of order, or cutting each other's throats in the name of liberty"

[1] Cole: *Fifty Years of Public Work* I, 200.

Forward they went, turning as they left the Transept to the right down the north side of the western end of the nave, not far from where the great Jacquard lace-machines were weaving their intricate designs. Past Keith's Silk Trophy, and Thomas's Fountain, close by De la Rue's envelope machine with its magic finger, and the steam printing presses vomiting their huge, square sheets. Past the statue of Shakespeare and the Colebrookdale Dome; the Lighthouse apparatus and Rosse's Telescope; the Church, the Bridges and Marochetti's Colossal Head of a Horse, and then the great scale model of Liverpool Docks.

Then, round the end by the stick-and-umbrella stand, and this time back again along the south side of the aisle with, on the right, British textiles and hardware manufactures, all the way back to the Transept. Then, turning southward past Canadian raw materials, under those beguiling groups of statuary; *Satan Subdued*, *Satan Tempting Eve*, *Satan Vanquished*, down into India. Round again, and up into the eastern—the foreign—nave; through the Levant into France, Belgium, Austria, the Zollverein and Russia, and away to the United States which occupied the whole of the eastern end of the nave with redundant space and Powers' *Greek Slave*, a collection of revolvers and an assortment of milk-pails.

And on the return journey the procession passes through the German States, and those unwilling neighbours, Rome, Tuscany and Sardinia. It crosses Spain and Portugal.

And the Queen sees the Koh-i-Noor in its gilded birdcage, a safety device by Messrs. Chubb; and Dantan's zinc statue of herself; *The Dancing Faun*, *Godfrey de Bouillon*, a colossal figure; *Mazeppa*, dear to the romantics, and the display of stained glass. Now they are passing the portentous bronze *Amazon* by Herr Kiess which she so greatly admires—only that morning the Prince of Prussia has presented it n replica to the infant Prince Arthur on his first

birthday. But the Bavarian Lion is impressive too; so are the Würtemberg Horses, and that touching *Fisher Boy;* and so, away they pass into the United States' area, huge, half-empty, yet bravely owning the entire eastern end, like a challenge.

On and on they go, confident and untiring, a throng of multitudinous birds in a vast aviary, a sight never to be forgotten, never to be repeated.

Seeing the Koh-i-Noor.

By courtesy of the Proprietors of *Punch.*

Diaphanous, brilliant, scintillating, with the sunlight flooding through the translucent aisles among palms, music, flowers and acclamations; palms, music, flowers and statuary; palms, music, flowers and colour; flanked all the way along by the natural, the useful or the ornate productions of the Victorian renaissance. Small, ceremonial figures indeed, but how pompously they celebrate the apotheosis of humanism in its glittering temple, and ring in, officially, the new material age.

The ceremony was over. Returning to her throne under the canopy, the Queen gave orders through the Prince to Lord Breadalbane, who loudly announced the Royal command to declare the Exhibition open. There was a flourish of trumpets, a 100-gun salute outside in the Park; tremendous cheering and a few emotional moments. "Everybody astonished and delighted," the Queen recorded that evening. Shortly afterwards she left. "The return was equally satisfactory," her account of the day continues,

> "the crowd most enthusiastic, the order perfect. We reached the Palace at twenty minutes past one, and went out on the balcony, and were loudly cheered. The Prince and Princess quite delighted and impressed. That *we* felt happy, thankful, I need not say; proud of all that had passed, of my darling husband's success, and of the behaviour of my good people. I was more impressed than I can say by the scene. It was one that can never be effaced from my memory, and never will be from that of anyone who has witnessed it. Albert's name is immortalized, and the wicked and absurd reports of dangers of every kind, which a set of people, viz: the *soi-disant* fashionables and the most violent Protectionists, spread, are silenced. It is therefore doubly satisfactory, that all should have gone off so well, and without the slightest accident or mishap . . ."[1]

* * * * *

And what of that enigma, the mysterious visitor from China? For the time being it was impossible to place him. He might after all have strolled over from the Chinese Collection at Albert Gate, which opened on the same day as the Great Exhibition, where Pwan-Te-Koo, the small-footed lady made her first appearance with her family and sang Chinese airs in the expectation of catching the returning crowds from the opening ceremony.

But he did not after all belong there either. He seems in fact to have been something of a fraud. His

[1] Journal.

name turned out to be He-Sing; he was the proprietor of a Chinese Junk moored to the Temple pier, to which he attracted a large crowd of sightseers by showing them over at 1/- a head. His little venture in publicity at the Crystal Palace brought him, it was rumoured, an excellent season and no end of trade.

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Herbert Minton's nephew, who had been superintending the family stand while his uncle moved about here and there receiving royal compliments on his porcelain, wrote home to his mother a detailed account of his experiences at the Crystal Palace.

> "Of course immediately on the departure of the Royal cortège all the barriers were thrown down, and the pent-up crowd soon threaded their way through the numerous avenues to the objects of attraction, among which our stand did not stand last. Lord and Lady Granville . . . came up and brought a large circle . . . I never saw so many handsom people and so many stylish dresses congregated together, and with the fairy character of the building it really was quite enchanting, and I could have sat for hours merely gazing at the people passing and re-passing. Just underneath our gallery there are several chairs placed round the Central Fountain. You may see several interesting têtes-à-têtes, general flirtations, young ladies looking out with their dowagers looking on "[1]

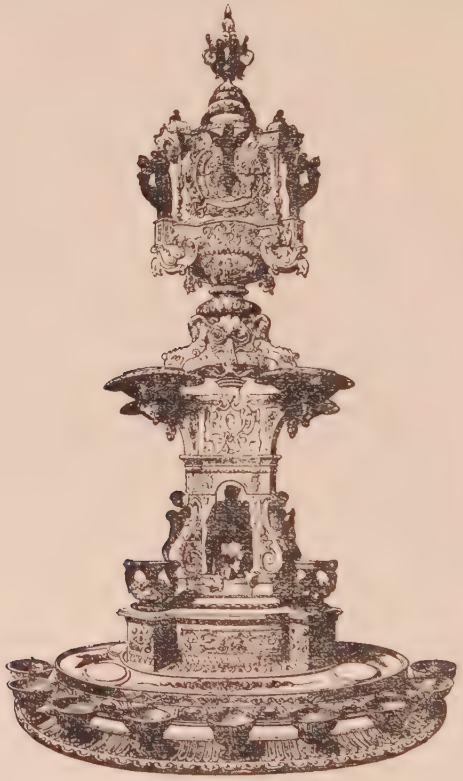
No doubt the sight was captivating.

Mr. Minton himself, it appears, was rarely seen by his enthusiastic nephew. "Uncle is sought out and courted by all," continued the young man later,

> "He escorted the Royal Family and the Prince and Princess of Prussia thro' the building the other day, and the Queen presented him to the Princess of Prussia as the manufacturer of 'that beautiful dessert Service.' Nothing now will do short of a place in the peerage. He is respected by all high and low, and moves about from one place to the other with the speed of the electric telegraph."

[1] Minton papers.

The success of the Exhibition was already beyond question. And although many of the foreign exhibits were still unpacked, those from Russia being the chief offenders, there were enough on view to set the imagination aflame.



Fontaine de Thé.

"Exquisite Tea and Coffee Service manufactured by M. Durand of Paris . . . The whole service is of massive silver modelled, chased and engraved in the very first style of art. It is valued at forty thousand francs. . . Midway in the centre-piece are four baskets for cakes, the angles of the tripod support each a small vase, on which the cream jug, sugar-basin and water-basin are objects."

Art Journal.

CHAPTER XII

NOT ONLY DID THE GREAT EXHIBITION LIVE UP TO the highest expectations, it exceeded most. Few people seem to have been disappointed, excluding some of its strongest opponents. Criticism, apart from that of constitutional *frondeurs* of the Babbage school of thought, seems to have collapsed before the intense emotion which accompanied the opening day. Hostility dissolved into the pellucid atmosphere of the Crystal Palace, and even the most aggressive protectionists were disarmed once they found themselves taking part in the monster transformation scene. As the summer advanced Colonel Sibthorp himself unbent and even paid a visit to "that accursed building." Altogether, one of the curious features of the Exhibition is precisely this: that it seems so to have hypnotised the visitors that they came away completely overwhelmed by its marvels; convinced enthusiasts, lacking the proper words to describe their impressions. It is hard to find an example of an eye-witness admitting that what he had seen fell short of his expectations. When it is remembered how much the Exhibition had been puffed and publicised; when one considers the torrent of literature, the press notices, the enormous illustrated supplements, the thousand contemporary ephemera: the souvenirs, the burlesques, the panoramas and the squibs; the articles, the speeches, the pamphlets; the gushing effusions and inept sentimentalities which preceded its arrival and attended its birth, it is astonishing that even for sceptics more disappointments were not in store. On the whole, everything seemed to please, astonish and bewilder by its range and magnificence,

its variety and genius; its general implication of boundless wealth. Visitors had a way of arriving quite unprepared for the shock of spectacular effect, and before the end of the summer the attendance, considerable to begin with, was to break all known records by doubling and eventually trebling its numbers.

* * * * *

Human nature behaved, as usual, capriciously, and even strong-minded Mrs. Villiers succumbed to the novelty:

> "What do you think, I've been to the Exhibition, I have indeed . . . I was allowed to use my eyes as much as I pleased, but not my legs. Tomorrow Lord Granville will allow me a wheeling chair. It must be ultra-splendid when one sees the whole. . . ."[1]

Thomas Love Peacock's attitude toward the whole enterprise had been chilly. He purposely kept away from the Exhibition for weeks. Then, one afternoon, in a moment of weakness he relented. He paid it a visit, and for the rest of the time it was open he returned every day.

Charles Dickens, from whom on the other hand, active patronage might have been expected; who, only a few weeks earlier walking along the sands at Broadstairs with Cole and Marcus Stone, had been bitterly criticising the policy of delaying shilling admissions by so much as even three weeks, ended by only going to the Exhibition on two occasions. He said that it used him up; that there was too much to take in. That he had in any case a natural horror of sights, and that so many of them all at once did nothing to lessen his distaste. He later declared that he had come away having digested nothing but the Crystal Fountain and the overpowering Amazon.

[1] *Nineteenth-Century Commentary.* By Marjorie Villiers. Quarterly, 1944.

The deep impression left on contemporary minds by the Exhibition was naturally due in part to the Crystal Palace itself. Apart from its revolutionary character as a setting, it showed off the exhibits themselves to great advantage. In those unlamented brickwork sheds put forward by the Commissioners as an alternative proposition such triumphant results could hardly have been imagined. Paxton's building had, beside its unique appearance, the advantage of displaying the goods with consummate showmanship. Its very novelty of appearance, though based upon nothing more original than the slender lines of a classic greenhouse, was exciting to an age which had become already inured to thinking in terms of solidity and weight. As it turned out, an engineering triumph was viewed by the public as an architectural marvel. Not so, however, by those who made it their business to judge of such matters. Ruskin, in more than one appropriate sentence dismissed it, together with its contents, from the field of serious consideration, at least in so far as it related to aesthetic taste. "In the year 1851," he was to write some time afterwards, "when all that glittering roof was built, in order to exhibit the petty arts of our fashionable luxury—the carved bedsteads of Vienna, the glued toys of Switzerland, and gay jewellery of France—in that very year, I say, the greatest pictures of Venetian masters were rotting at Venice in the rain, for want of a roof to cover them, with holes made by Cannon-shot through their canvass."[1]

In the same way the younger Pugin, to whom, as Mr. John Summerson has said, progress in architecture meant "a bee-line for the fourteenth-century"[2] had made no concessions to the Crystal Palace. To Paxton, who asked him what he thought of it, Pugin could only make one reply: "Think ! why, that you

[1] *The Opening of the Crystal Palace considered in some of its Relations to the Prospects of Art.* By John Ruskin. 1854.

[2] 1851—*A New Age, a New Style*, Listener, February 19, 1948.

had better keep to building greenhouses, and I will keep to my churches and cathedrals."

But such attitudes were exceptional. To the greater part of the visitors, less fastidious, more susceptible to surprise and avid for novelty the Crystal Palace was the chief exhibit. The views of Horace Greeley, an American official then in England are representative of the plain man's reaction to Paxton's vision of the future:[1] "The Crystal Palace which covers and protects all, is better than any one thing it contains, it is really a fairy wonder, and is a work of inestimable value as a suggestion for future architecture . . . Depend upon it, stone and timber will have to stand back for iron and glass hereafter, to an extent not yet conceivable," he wrote in a published account of his impressions.

Although Greeley was by no means an unqualified admirer of the Exhibition as such, he was shrewd enough to appreciate its importance: "I think it is a good thing for London first, for England next, and will ultimately benefit mankind." A significant remark so closely resembling those which had been made to Scott Russell in Berlin two years before as to warrant some heart-searching a century later.

Only if seen as symbolic of its age is it possible to relate 1851 to the general public, those crowds who streamed up and down the aisles, entranced and awe-struck by the sight of so much universal knowledge crammed together and demonstrating to their minds the sense of accumulation of untapped power. In effect it seemed to them a synthesis of human accomplishment, and in this preliminary stock-taking civilisation was confronted for the first time with the possibilities of organisation on something like a world scale. Now for themselves people could appreciate the meaning of progress; they could reap the first harvest of the nineteenth century, assess its potentialities and conclude its probable effects. It was plain

[1] Horace Greeley: *Glances at Europe.* New York, 1852.

and clear, for instance, that while French exhibits were the more elegant and luxurious, English productions held the lead in almost every field where strength, durability, utility and quality were concerned, whether in iron and steel, machinery or textiles. It was clear too that England was the workshop of the world, and that German and American competition was far behind. It was clear that England was acquiring enormous wealth and would continue to do so on an increasing scale for a long while to come: at the time it seemed, perhaps, for ever. It was plain that this new wealth would beget ease, a sign the times already reflected in opulent furniture, massive silver and pretentious taste lavishly and indiscriminately applied.

And that is as far as most people would have been prepared to go: 1851, as Lyon Playfair was later to observe, was the starting-point in the modern history of English manufactures and arts; the more so since it gave an impetus to industrial reforms.

All the same behind this visible curtain of material prosperity there lurked an element of dismay. Those pioneers of the new age were far more conscious of the romantic character of the journey upon which they had set out than might have been suggested by a casual acquaintance with the period. They were compounded of contradictory elements, and in the first part of the reign, before the cementing process had set in, the later era of financial prosperity, it is doubtful whether the term Victorian would have applied to them at all. If we think of them as neo-Elizabethans we shall be nearer the mark; neo-Elizabethans in temperament, with their love of colour, of show, of ornament and of poetry. Tempered only by the Evangelical discipline permeating all classes, and subordinating the more uncontrollable spirits with a frown of sour severity.

If we remember our middle-aged Englishman and his stormy and romantic background he will not

lightly be consigned with his contemporaries to that company of Philistines who tend, somewhat stodgily, to cumber the platform of later Victorian England.

What, for instance, were his tastes? What was he reading? He could count on a classic or two every year; was as familiar with the writings of Arnold and Ruskin as he was with *Eothen* and *Wuthering Heights*; had been stirred to the depths by *Tracts for the Times*, and laughed till he cried over Lear's *Book of Nonsense* and the *Ingoldsby Legends*. Only the year before he had read *Alton Locke*, and been swept away by *In Memoriam*, which offers in a way, the key to the whole period. For here, in his easily comprehended and supremely lyrical thought, Tennyson had succeeded in framing his own interpretation of progress, a synthesis of change, decay and improvement attained only after the purifying process of trial and error. And this idea, as Professor E. L. Woodward[1] has already made clear, was visibly confirmed by the great geological discoveries of the century. To the men of 1851, faced as they were by the cold facts of science, the assurance was comforting that they were at least still the instruments of the Divine Will. That they too, beside the accumulations of geological deposit might

> "rise on stepping-stones
> Of their dead selves to higher things."

It was an idea which fitted in with the prevailing mood of doubt as one scientific discovery after another made its attack upon religious fervour. It was one which could be visualised; grasped. And if Tennyson's views—though never divorced from religious belief—might have seemed a little unorthodox to the public of his day, so too, in a different way, were those of a man like Charles Kingsley.

At all events we may see *In Memoriam* as related directly to 1851: both are outstanding events of the mid-century, both are eloquent with *Zeitgeist*, and

[1] 1851 *and the Visibility of Progress*, Listener, February 19, 1948.

Tennyson's great threnody had the effect of a life-line thrown out to those bewildered legions at

> "A time to sicken and to swoon
> When Science reaches forth her arms
> To feel from world to world, and charms
> Her secret from the latest moon"

In a moment when the redoubts of Belief were being stormed, revelations of natural history—those "howlings from forgotten fields"—were drawing shudders of fear. So, to the throngs swarming through the nave past specimens which showed the immeasurable antiquity of the earth, Tennyson had offered a key to their unuttered questions, voiced their dawning doubts, expressed uncomfortable, haunting fears. One of the exhibits, for instance, points clearly to these preoccupations. It is the *Trignometrical Model of the Undercliffe, Isle of Wight*; the kind of thing to be seen in one of the showcases of the Geological Museum at the present day. At that time it was a new idea. It revealed not merely the topographical features of the island, but also the geology of the specified coastline.

In his *Handbook to the Great Exhibition*, Robert Hunt, a technical writer, discusses this particular model; it is clear that he attaches great importance to exhibits of this nature. "In the sections of the cliffs," he writes,

> "the succession of strata is beautifully displayed; various divisions of the lower greensand are seen capping the Wealden strata, which are the lowest beds exposed. The lower greensand is capped in turn by the gault; and then succeed the upper greensand, the chalk marl and the chalk forming the highest portion of the ground modelled. As there are many considerable disturbances displacing and dislocating the strata within the area selected, very curious geological phenomena are exposed in a highly instructive manner."

The road which had seemed to lead upward so easily seemed suddenly to have switched its direction, to point downhill steeply, stonily, and to disappear round a rock. Where were they going to? How was

it all to end? Tennyson did not pretend to have found the answer. He merely expressed his fears, and found them echoed. He seemed above all to reflect the prevailing mood of wonder; to voice, like a chorus, the apprehension of tragedy. Again and again comes the agonised hope that there is some meaning to it all,

> "that nothing walks with aimless feet,
> That not one life shall be destroyed"

And if his spirit hovers over the Crystal Palace, and Professor Woodward is correct in his theory, then *In Memoriam* is a better handbook to the background of the scene than all the assortment of official guides and catalogues. Since its publication only the year before, it had been read by half the country; with a raging thirst for poetic sentiment and moral stimulus, the public drained it to its last reviving dregs, and went to the Exhibition intoxicated by allusions at once so pregnant with change for triumphant mortality. To the eager, early Victorians the sense of prosperity was still something new. They had abundant advantages; they seemed to be well on the way to their particular goal. At the end of it beckoned Free Trade with its foretaste of internationalism, good will and permanent peace. The reforms that lay so thickly studded across the first half of the century had deluded them into believing that human nature could and must eventually change. Yet all that had really been accomplished was an improvement in behaviour; a temporary modification in public opinion. That, at any rate, was better than none. It was a change in the right direction.

Charles Kingsley, too, was acutely aware of the implications of the time. To a man of his moral vehemence the Crystal Palace was nothing if not a symbol of the ideal future. Upon first going into the Building, he was moved to tears; the whole conception seemed, to him, to take on a religious meaning

quite apart from its industrial or economic significance. To such an idealist its creation seemed to foreshadow universal peace founded on the brotherhood of man, but he was never in any doubt as to the distance separating promise from fulfilment. If in his hopes for the future he mistook a humanist universe for an inaccessible Utopia he, at least, was a convinced believer. The Prince Consort nourished fewer illusions, much as he felt the experiment to be worth the trial.

Soon after the opening, Kingsley had preached strong words at St. Margaret's, Westminster, on the relation of the Great Exhibition to Christianity, denouncing the country for its materialistic and irreligious state. He emphasised the importance of Prince Albert's address: "Great words," he told his hearers,

> "but in the hearts of how few, alas ! to judge from our modern creed on such matters, must the really important and distinctive points of them find an echo. To how few does the whole Exhibition seem to have been anything but a matter of personal gain or curiosity, for national aggrandisement, insular self-glorification and selfish—I had almost said treacherous rivalry with the very foreigners whom we invited as our guests."

Sharp words, indeed, and coming very close to the bone.

We are inclined to see 1851 as a peak period of nineteenth-century idealism and reviving faith. Yet it is clear that contemporary minds saw it otherwise. The occasion inspired many homilies beside Kingsley's; all of them drove home the lessons of the Exhibition with special reference to the great social problems of the time. Influential divines like the Reverend Frederick William Robertson were not slow to improve the occasion; Sabbatarian bigotry was soundly rebuked for condemning a form of entertainment in itself so harmless and so instructive; so preferable to the junketings of a former age and

ruder sort, when Bartholomew Fair, for instance, and that maypole of merrie if dubious memory were the annual recreations of the public. "And many a man," he predicted with awful solemnity,

> "who would gaze upon the domes of a Crystal Palace, rising above the trees, with somewhat of the same feeling with which he would look on a temple dedicated to Juggernaut, and who would fancy that something of the spirit of an ancient prophet was burning in his bosom, when his lips pronounced the Woe ! Woe ! of a coming doom, who would sit calmly in a social circle of English life, and scarcely feel uneasy in listening to its uncharitableness and its slanders . . . would survey the relations of the rich and the poor in this country, and remain calmly satisfied that there is nothing false in them, unbrotherly and wrong."[1]

On every side the age of materialism betrayed its presence. For while carved furniture might be, and indeed was greatly admired, the rage for material realism was such that nothing in the modern Victorian mind came up to the newly discovered beauty of machinery: "So plain, so solid, and yet so eminently handsome—nothing, indeed, so thoroughly English as that iron type of our indomitable energy . . ."[2] It formed, as it seemed, a passport to national greatness. It took, declared Henry Mayhew, the foreigner by surprise. Frenchmen and Germans were spellbound, grouped round each revolving exhibit as the attendant demonstrated each peculiar merit. Thus the machinery department bore witness to British industrial supremacy. And coal and iron were its chief materials.

The accumulation of wealth was enormous; it was being applied to the development of other, less prosperous countries. The world had been prised open by British mercantile supremacy and the wonder-working sterling. The Cobdenites staked

[1] F. W. Robertson, *Sermons*, 2nd Series.

[2] H. Mayhew : *1851 : or, The Adventures of Mr. and Mrs. Cursty Sandboys.*

their economic faith in the spread of plenty, the exchange of commodities and in the eventual disappearance of war by the removal of its economic causes. What no one seemed to be considering was the eventual force of competitive rivalry; of the nationalisms it would arouse, and their corresponding passions of envy and jealousy. These would be the imponderable elements, too distant to cause much concern to the crowds who surged across the barriers in their enthusiasm after the opening ceremony. Their attitude must be judged against the background of their period. They were full of curiosity, intensely enthusiastic, eager to see and ready to be informed.

CHAPTER XIII

UNDER THE PRINCE'S ORIGINAL CLASSIFICATION ALL the articles would have been exhibited without reference to their country of production. One of the first signs of breakdown in this system had come with the failure of the foreign countries to supply particulars of their space requirements, when the whole process had had to be rearranged on a geographical basis. Apart from machinery in motion[1] each country had had to arrange its own exhibits separately. Classification, in fact, was in the air. Even the Registrar-General stood to benefit; he was contemplating how far classification of objects might be useful for classifying persons in trade with reference to population returns.

Every contributor had been required to state in what capacity he was exhibiting. Whether as producer, manufacturer, importer, designer, inventor, or simply as proprietor of the goods in question, for the sources of merit are sometimes obscure, and difficulty was anticipated in ascribing varying degrees in proportion to the exact part played by the inventor, the designer, the manufacturer and the capitalist launching the article.

Pricing had been another trouble. Some had been for compulsorily fixing prices to every article; others felt that this should be optional; still more had been for forbidding them on the grounds that the Exhibition might resemble a bazaar. In any case the Commissioners felt themselves incapable of verifying

[1] An ambiguous term when it came to space allocations : one application was made for a space 1′ × 1′ in order to exhibit machinery in motion. This turned out to be a watch the size of a pea.

the true cost of any exhibit. Babbage, on the one hand considered pricing so essential that it could be said to govern the whole principle of the Exhibition. He accused the Commissioners of inexperience of the fundamentals upon which all such displays must rest. Price was to him as to many others the ultimate deciding factor by which any commodity is judged. In the end although they had not been affixed articles were allowed to be marked as shown for economy of production. On the other hand, since production costs weighed to some extent with other considerations in the matter of awards, enquiries were admissible by juries. No public display of prices was, however, permitted.

Assistants were allowed to be employed by Exhibitors, in order to display, tidy, or demonstrate the goods. There seems to have been a superabundance of these; seventeen hundred and fifty alone swamped the British section, many of them women redundantly employed in interpreting trifles such as patchwork, tapestry and that tidal wave of Berlin woolwork, "examples", as the *Illustrated London News* severely put it, "of industrious idleness with which our ladies manage to cheat Old Time." Fortunately these zealous helpers were forbidden to tout.

Stalls were rent-free; a decision which had been taken reluctantly by the Commissioners who went in constant dread lest the Exhibition might not be self-supporting. Still, they had been put to the blush by the thought that foreigners would have jibbed at a practice unaccustomed in their own national displays. To have demanded rent from them would have appeared extortionate beside being bad business. This was why the idea had been ultimately abandoned.

Then they had excluded a number of articles: those that were combustible, on grounds of safety; those, like fruit and flowers, that were perishable; antiques, on the grounds of inappropriateness in a modern display, and finally paintings and drawings which

were ineligible on grounds of inconsistency with the industrial character of the Exhibition, except where they were illustrative of some new process or material. Nothing whatsoever was allowed to be sold within the building excepting the official catalogues, refreshments, token medals struck on the spot, and bouquets of flowers. Sticks and umbrellas were discouraged, but stands had been provided at the main entrances.

* * * * *

British exhibits filled the entire western nave. Foreign articles occupied the eastern half of the building. The Transept was for purposes of arrangement treated like the equator; countries and colonies lying nearest it being concentrated round the centre, more or less according to latitude. In the British division heavy articles were displayed on the ground floor; the lighter ones upstairs in the galleries. Machinery, on the north side of the building was placed conveniently near the steam pipes laid on from an adjoining power-house outside the building at the north-western end. Raw materials were assembled along the southern side; manufactures and fine arts shared part of the frontage along the central avenue.

London was strongly represented by steam-engines; all told some sixty motive power machines were on view. Mr. Nasmyth showed his steam-hammer, and the Messrs. McNicholl their travelling-crane. Mr. Garforth demonstrated his riveting-machine.[1]

One of the most significant of all the exhibits was Shepherd's electric clock, fitted into the structure of the Crystal Palace over the South Entrance, so that its huge index hands moved slowly across the semi-circular dial from which radiated like a gigantic fanlight the twelve steel divisions of the Transept frame. It was an ingenious idea; unusual on account of its elliptical design enclosing the twelve hours. And though not the first of its kind, it was in its way

[1] All three received awards.

a symbol of its adventurous age. Dominating the approach to the southern elevation, it impressed beyond words the crowds who passed into the Exhibition under its gilt hands. It seemed to represent the culmination of human skill over the great physical forces controlling the universe.

Two more clocks of this type were repeated; one in the Transept; another at the western entrance. They were wired to the parent mechanism "and thus", the *Illustrated London News* ingenuously explained to its readers, "the time is accurately telegraphed from dial to dial and all show the same time." Though there were other electric clocks in the Exhibition, none could compete with the interest of this remarkable achievement.

Yet even so, electric devices were still looked upon by many leading engineers with little more than contempt; playthings, ingenious perhaps, but not to be taken seriously. The great Brunel, then at the height of his career rebuilding Paddington Station, deliberately told Scott Russell that he wished to see excluded from the Exhibition of 1851 "any mention of *electric machines* which as yet can only be considered as toys."[1] An illuminating remark seen against the background of his own giant steam engines which were to be considered *useful*. It was perhaps fortunate that his advice was ignored, since the use of another apparatus, the *Electric Telegraph* was indisputable. This had been installed inside the Exhibition building, and its function was to warn officials of the presence of pickpockets. Elaborate arrangements had also been concluded whereby, at a telegraphic message from Colonel Reid to police headquarters a black ball was to be hoisted onto the Transept as a warning that the building was full and the Park gates were to be closed. However, according to Cole,[2] "these curious devices were never employed; and it may be said

[1] Noble. *The Brunels.*

[2] Cole : *Fifty Years of Public Work.* Vol. I, 188.

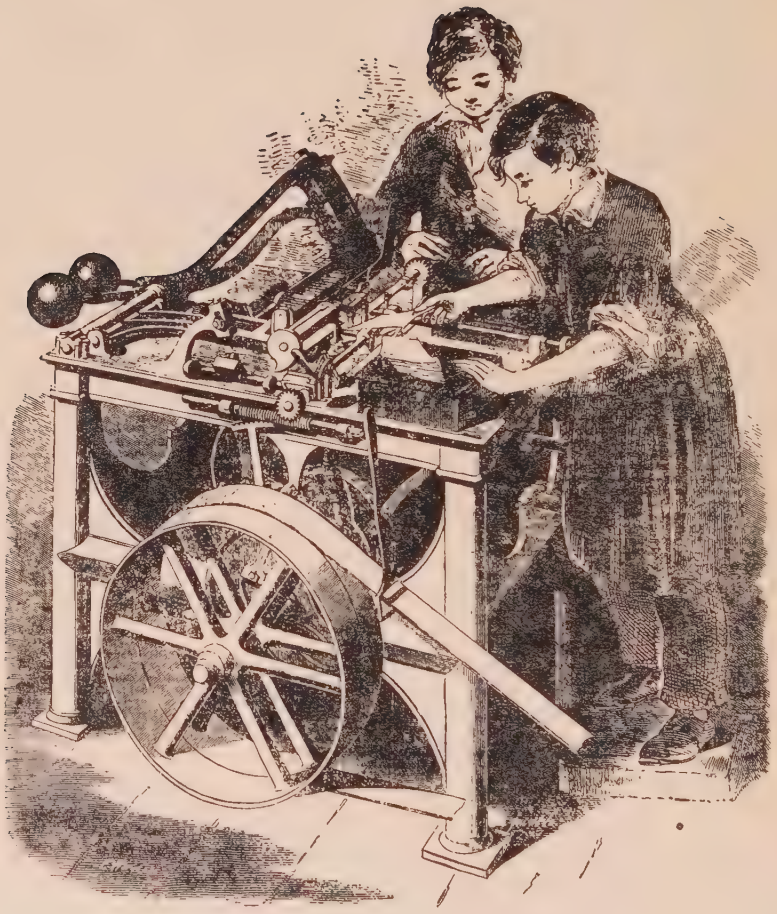
Victoria and Albert Museum

THE MEDIAEVAL COURT

that the great building, even with ninety-three thousand persons in it at one time, was never so crowded as a lady's successful soirée." This seems rather a surprising statement to a generation unaccustomed to the perils of ladies' successful soirées.

The effect of these new mechanical inventions upon a public still so unsophisticated is one of the most attractive features of 1851. Reading accounts of the event one is constantly reminded of the chasm, not so much in time as in feeling, which divides that year from the present. It is the chasm between Before and After; the difference between innocence and experience. For it is perfectly clear that whatever may since have been gained in comforts, much more has been lost in quality; science inevitably reaches forth her arms at the cost of profounder spiritual values. In 1851 faith in progress could still touch the heart and inspire the imagination. Enormous locomotives, rotating machines, and the subjugation of mysterious natural forces, were awe-inspiring sights. To stand in the machine-room and be deafened by the pandæmonic sound of hissing steam and clanging metal was, we read, a deeply moving experience, overwhelming minds with the thought of its possibilities. Many of the strongest were affected to tears. This was perhaps not so much the result of spiritual exaltation as an echo of the sentiments of Dr. Sumner, a too complacent sense that the Almighty had "vouchsafed to confer upon us so much of His Own Power." In other words, it was Pride.

Among the most rewarding of these impressions was that provided by *De La Rue's Patent Envelope Machine* which had somehow strayed away from machinery in motion and was performing its amazing automatic sleight of hand in glorious isolation. It drew crowds. By what was contemporarily described as "a series of the most beautiful mechanical movements it is possible to conceive," it cut and folded, gummed, forwarded



De la Rue's Patent Envelope Machine.

By courtesy of the Proprietors
of the *Illustrated London News*.

and delivered thousands of envelopes an hour; and was worked by only two boys.

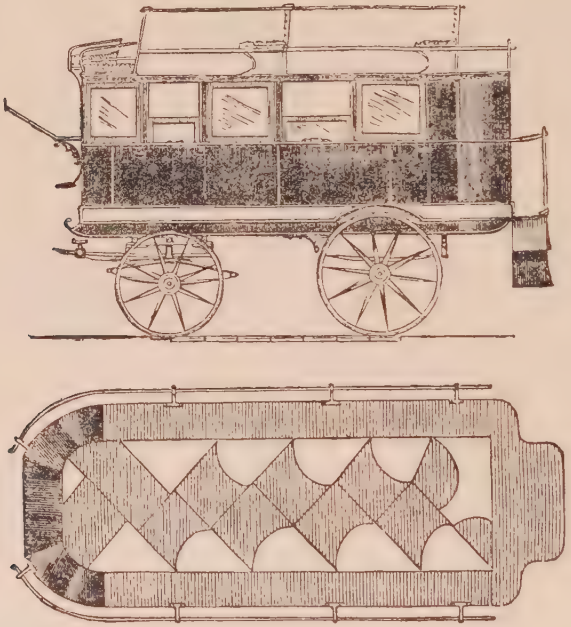
In the machinery in motion section were a monster pump with twin mouths from which gushed rivers of water; steam printing presses; carding and spinning-machines, and a loom which turned out poplin a quarter of a yard wider than usual. There were models of corn-cutting machines among the agricultural machinery, little known so far, yet already the objects of considerable attention on the part of inventors. Robert Hunt devotes several pages of his handbook to an analysis of their respective merits in view of the fact that "a machine that will efficiently represent hand labour in the harvest-field would be a great boon to the farmer, as in all field operations, despatch, in such a climate as ours, is a matter of great importance. . . ." He concluded, however, that none of these had so far seemed capable of meeting the difficulties eternal to farmers: unevenness of surface, or laid crops.

A gas cooking range was exhibited by a Liverpool engineer named King. It seems to have been one of the earliest specimens, and hardly varies in principle from its twentieth-century descendant. "It is divided into three compartments of different sizes for roasting and baking," according to the correspondent of the *Illustrated London News*,

> "being furnished with a damper to regulate the flow of air through them. The burner is arranged inside the oven, at bottom, around the sides, back and front, with a dripping-pan occupying the centre. The meat is hooked on to a sliding frame or carriage, which, when pushed in, allows it to be suspended surrounded by gas. On the top of the range are eight spiral burners, in round well-holes, for boiling, stewing, frying, etc., any of which operations can be done with the same facility as on a hot plate or over a charcoal fire. . . . By the operation of broiling, twelve chops can be cooked at once, at a cost of not more than *2d.* per hour for gas which gives at the rate of sixty chops at an outlay of only twopence for gas. Comfort and

cleanliness to the cook, and economy to the consumer, are among the qualifications of this useful invention. The gas is lighted with a gas torch, or portable jet of iron pipe, attached to a flexible pipe."

Some of the exhibits were of a freak type, and destined not long to outlive either the period or the test of practical economics. Among these were



Franklinski's New Patent Omnibus.

By courtesy of the Proprietors of the *Illustrated London News*.

Franklinski's Patent Omnibus, which plied, along with so many other types, to and from the Exhibition. This was a curious conveyance. It seems to have been designed with a view to combining some sort of seclusion with cheap transport, and provided, according to Mr. Hunt,[1] the following advantages:

[1] *Handbook to the Great Exhibition.*

"(1) A separate compartment for each passenger upwards of 26 inches wide, which obviates the possibility of robbery or infection, or annoyance of any kind, whilst, should it be desired, communication is easily attainable.

(2) An outside gallery with a separate door to each compartment, which does away with the nuisance, formerly experienced, especially by ladies, of entering at the end, which will be considered by those who prefer riding outside, a great improvement upon the present dangerous and inconvenient way."

Philanthropy was prominent. The *Society for Improving the Dwellings of the Labouring Classes*, of which the Prince Consort was president, had originally submitted a memorandum requesting to be allowed to exhibit a Model Lodging House designed to acommodate four families. It was, perhaps naturally, not allowed to stand in the Exhibition building, but after negotiating with the Board of Ordnance, the Horse Guards and the Woods and Forests for general assistance and sanction, permission had ultimately been obtained to build on some vacant ground near Knightsbridge Barracks. The cottage had eventually been erected at Prince Albert's expense, and was now exhibited by him. It showed the advantage of installing new, economical, and well-adapted working class dwellings, and while not included in the Exhibition itself, this contribution was considered to form part of it.

Prince Albert's Model Lodging House was designed to house four working class families, and to admit of the addition of a third or fourth storey in cases where such an addition might seem desirable—from an economic point of view. The curious may see this still; a noble if dingy relic of pioneering philanthropy it stands on the edge of Kennington Park to which it was subsequently transferred.

The illustration on page 220 shows the four dwellings arranged two on each floor; forerunners of the modern

PRINCE ALBERT'S MODEL DWELLINGS.

By courtesy of the Proprietors of the *Illustrated London News*.

flats. A central open staircase recedes from the front, connected by a gallery on the first landing. Each dwelling is entered through a small lobby; there is a living-room; a scullery, fitted with sink, coal-bin, plate-rack, meat-safe, fitted shelves and dresser-flap. A dust shaft leads into a closed repository under the stairs, and has a ventilating flue carried up above the roof. Bedrooms, "three in number, provide for that separation which, with a family, is so essential to morality and decency. . . . As the children's bedrooms, moreover, open out of the living-room, an opportunity is afforded for the exercise of parental watchfulness, without the unwholesome crowding of the living-room by its use as a sleeping apartment."[1] Here speaks the authentic voice of the new hygiene and that sense of respectability which by the end of the century had taken its firm hold over the whole country.

Modern sanitation in the shape of Staffordshire glazed water-closets was installed, and the greatest interest in this experimental little building lay in its exclusive use of hollow bricks for the walls, and the absence of any timber in floors and roof, which were constructed of flat arches of patent hollow brickwork, set in cement, rendering, with various other new devices, the whole structure less liable to damage by fire.

By this exhibit the Prince Consort as President of the *Society for Improving the Dwellings of the Labouring Classes* led the way in showing how their object could be achieved. What he or anyone else seemed unable to do was both to break down the existing prejudice against a new type of dwelling such as this on the side of the prospective tenants, and equally to get the capitalist to embark on such projects in a large way.

That a moral was pointed at every convenient opportunity is perhaps not surprising. The Tower of Babel had sprung up very suddenly with alarming

[1] *Illustrated London News*, July 14, 1851.

realism, and it was one of the avowed objects of the Commissioners that the Exhibition be used to elevate spiritually and mentally, in addition to physical improvement of the race; "that whilst the inspection of its works of industry should tend to elevate taste and instruct in economising time and labour, it should also impress enduring lessons of higher moment."[1]

With this in mind, the London clergy, profiting by the number of religious organisations at their disposal, had invited foreign protestant ministers to England, with full facilities for holding services in their own languages, and the spreading of religious instruction. They were exceedingly active, formed committees for special services such as Foreign Aid, conferences, extra Church and extra Sabbath services. Services, too, were provided in French, German, Swedish and Dutch by Church of England clergymen and foreign protestant ministers. They held a *conversazione* to introduce foreign pastors to the clergy, stood a dinner for two hundred at Freemason's Tavern, and distributed nearly half a million tracts.

The activities of the British and Foreign Bible Society were equally zealous, if, on the whole, unfortunate. Soon after the opening of the Exhibition, Lord Ashley, the Society's president, had written to Prince Albert to complain of the extremely unfavourable position assigned to the committee's translations and versions of the Holy Scriptures, and requesting a more conspicuous display.

It turned out that the bibles were indeed unfavourably placed. The Society's agent had, it appeared, applied too late for the space he required; had not specified his wishes, and by all the rules should have been disqualified. He had also failed to make it clear that his exhibits were intended to demonstrate the zeal of the Society. Britain alone, for example, was showing the Bible in one hundred and forty-eight distinct languages, of which one

[1] *First Report of the Commissioners*, 1852.

hundred and twenty-one had never before appeared in type. Owing, however, to the unintelligibility of the agent, a Mr. Roberts, the Society's exhibits, for which space had ultimately been found although after the expiry of the time limit, were discovered to have been placed between a railway model, a distilling apparatus and a malt machine.

Then Lord Ashley had stepped in to complain. The Commissioners were distressed. It had indeed been their earnest wish to be helpful, but instructions had been somewhat confused, and the upshot of it was that a case of bibles had been deposited on the floor in a dark corner under a staircase. For the Commissioners, it now appeared, had considered the bibles merely in the light of examples of fine printing, and this explained why they had somehow become mixed up with machinery. They did, it is true, their utmost to set the matter to rights, but it was by now too late to do much.

There were, besides, a number of incidents. Persons of the type of Mr. Rochfort Clarke, who considered himself as the mouthpiece of a considerable Church party, and had gained a temporary notoriety through his correspondence with Cardinal Wiseman, now wrote pruriently to the papers attacking the statuary in the Exhibition on the grounds of its indecency and superstition, and consigned to an imaginary lime-pit all the most admired features. Away with the images, he cried, of classical Greece, Pagan Rome, aye, and Papal Rome, too. But he was not taken very seriously. Unfortunately, perhaps, since the statuary, like most of the works of art, were hardly the Exhibition's strong point.

This, however, has little to do with the fact that in 1851 the sculpture exhibits were generally admired. Abundant evidence is there to prove how popular were the subjective figures, each simulating its little allegory appropriately sugared over with the prudery of cloying sentiment. Innumerable figures were

depicted in varying states of nature, almost all lacking in either artistic integrity or anatomical accuracy. Whether in the giant equestrian *Amazon* or in the meretricious *Greek Slave* coyly languishing in her metal chain; in Kirk's *Ariadne*, Thomas's *Rosamunda*, or the meaningless *Dorothea* by Bell, the result is the same.

"A graceful statue by Puttinati, of Milan, which he terms *Morning Prayer*, is full of the best feeling generated by the choice of a subject replete with sentiment." *Art Journal.*

All are examples of false and debased versions of art for the million. Powers' *Greek Slave* had indeed already figured diminutively as a statuette in Parian ware at £2 2s. 0d. by Mintons among Summerly's Art Manufactures for some years, and had proved itself a popular best-seller. The original, now on view, could hardly escape the most extravagant admiration.

The hardware class was strongly supported. The Midlands were brazen with eloquence. Sheffield and Wolverhampton had a large representation. Colebrookdale's dome, gates and fountain were con-

spicuous. There were stoves and grates and ornamental fenders; metallic bedsteads from Birmingham featuring brass pillars made out of one tube, and any number of ornamental gas-brackets, candelabra and curtain-holders, disguised out of all recognition with nymphs, cupids, shepherds, dragons, caryatids and grotesque arabesques; convolvulus motifs twining themselves around a utilitarian object in passionate desire to conceal their functional purpose.

Steel pens were a fairly recent wonder. Mass production of these had been in progress only since 1828, when M. Gillot and in 1830 Mr. Perry invented and perfected machinery for making and slitting pens so as to overcome their stiffness. As a process this had been considered one of the wonders of the time.

* * * * *

Textiles were objects of considerable interest because the process of manufacture was demonstrated in various stages; the looms exhibited, explained and discussed. Silk, cotton, flax and wool in their different methods of manufacture were all on view; even the *saw-gin* from the United States to separate "cotton-wool" from the seed, the device invented in 1793 by Eli Whitney through which the work of a thousand men could be performed by one. Calvert's *scutching machine*, exhibited by Hibbert, Platt and Sons was considered the most perfect of its kind in use in any country. Jacquard's power-looms were strongly represented; many others as well. Some of them were models dating back to the 'nineties of the preceding century; others completely up to date. The old looms were still in use, working at 60 picks a minute. 1851 models could be driven at 220 picks a minute, needing the attention of only one hand for every two looms.

Professor Lewis Gordon, a technical writer, commenting on these facts in a contemporary magazine,[1]

[1] *Art Journal*, 1851.

strikes a note of apprehension at the close of his explanatory article:

> "An experienced operative of the manufacturing district, working the modern looms, produces 26 pieces of printing cloth, 25 inches wide, 29 yards long, and 11 picks per $\frac{1}{4}$ inch, in a week of 60 hours. The cost of weaving each piece is $5\frac{1}{8}$d, less than 6d ! If the same cloth were woven on the old loom, one operative would produce only four pieces and at a cost of 2s. 9d each; or the weaver's wages in 1800 were as much as the entire value of the *cloth* in Manchester market at present. Wonderful mechanical result ! What are the moral results ?"

Babbage, too, gives some illuminating comparisons between prices ruling before and after the introduction of machinery. In 1813 the price of plain Nottingham lace net was 21/- a yard. In 1851, thirty-eight years later, not only had the price dropped to 3d. a yard; the lace was of a far better quality.

The Prince Consort was among other things an exhibitor of cashmeres, specimens of which were described as "arranged in a tasteful glass case" in the central avenue facing the woollen section: two shawls, two dress pieces, and some coarse woollen cloth manufactured from the wool of Kashmir goats from his own farm at Windsor. Cashmeres were the great fashion; the Indian design with its mango pattern and variegated colour was the rage in France, just as its counterpart from Paisley was becoming in turn in England.

* * * * *

British colonial exhibits were present in strength. Canada's Timber Trophy, a rather gaunt and greenish scaffold of logs topped by a birch canoe formed one of the more primeval features of the central avenue. She also, through the medium of the Hudson's Bay Company, exhibited a collection of hides, pelts and furs. Her fox and beaver skins were being regularly exported to Russia and China, her lynxes to the American market. Her wolverine to Russia; her

martens, minks and musquashes were destined for Europe. Canada also showed minerals from her then almost untapped sources. Various ores were represented, especially those suitable for industrial application: iron, lead, copper, and nickel, gold, silver, manganese and molybdenum; iron pyrites, quartzes and many others. She sent over building materials, refractories and mineral manures; agricultural implements; agricultural produce. Wheat, her chief commodity to be was exhibited by no fewer than twenty-three exhibitors. But at that time Canadian wheat was hardly a commercial proposition. The scale of wages was almost double that existing in England, and the scene of cultivation was usually too far from transport or market to make the transaction economically possible. Canadian wheat was usually exported to the United States which in turn exported its own produce to the United Kingdom.

Most of Canadian production was in the region of raw materials. Maple sugar, a curiosity, aroused interest and comment but somehow failed to attain popularity. Local handcrafts of Indian origin were shown. There seems to have been only one example of scientific interest to arouse comment from Mr. Hunt: this was a fire-engine: "This beautifully-constructed engine has been pronounced to be of very extraordinary power, and it certainly is most ingeniously arranged."[1]

The various provinces of Australia contributed on a similar scale: from South Australia came the innovation of "preserved fresh meats" claiming to be more than three years old, to have already travelled sixteen thousand miles and to have lost none of their freshness. Western Australia was the contributor of a great variety of ornamental woods; New South Wales of wool and leather; Van Diemen's Land of mineral products and innumerable curiosities.

New Zealand sent flax, wool and raw materials.

[1] Hunt: *Handbook.*

From South Africa the Cape contributed ostrich eggs "which are considered great dainties by the Hottentots, and are cooked by being plunged into the live embers of a wood fire."[1]

Ceylon, as a Crown dependency, sent over coffee and spices, essential oils and pearls; rubies, topazes and sapphires.

Malta exhibited ornamental work of all kinds; silk, lace and silver filigree work. The smaller British colonies were all represented, many of them by tropical or sub-tropical vegetable produce; of these the largest groups were the West Indian Islands.

India occupied a unique position in the Exhibition of which she was the treasure house. Her contribution was immense. Her minerals, vegetables and agricultural exports and manufactures fill page after page of the official catalogue and can only be referred to at random. Cotton, rather primitively prepared and packed, yet exquisitely woven; Dacca muslins and Benares brocades, and embroideries from Delhi accompanied by cashmere shawls, works in precious metals; ebony, ivory and sandalwood. She sent sugar, indigo and opium, and specimens of tea. But what impressed the public most of all were the flamboyant offerings to the Queen by the Indian rulers: the silken palanquins, and howdahs and jewelled thrones; the diadems, the ornaments; the glittering horse trappings, the gems, cut and uncut; the marbles and the minerals; the diamonds, flashing piles of illimitable wealth.

Among the work of gold and silversmiths in the British section, Hunt and Roskell's display stood out. It included the silver plate presented to Lord Ellenborough by friends in India. A monumental table centre accompanied by candelabra was composed of a palm-ornamented plinth surmounted by the figures of Asia crowning Britannia. Elephants, camels, sepoys, Afghan and Chinese captives com-

[1] Hunt: *Handbook*.

pleted the scheme of the whole which carried *bassi relievi* presenting four historical subjects connected with British India.

The contents of the Crystal Palace had been insured for over £1,000,000, but this was exclusive of the most valuable single exhibit: the Koh-i-Noor diamond lent by the Queen. It was, although strictly speaking merely a specimen of raw material, one of the exhibits most stirring to public imagination. Yet, as such, it did not quite come up to expectations. That this was so seems to have been due to its unfortunately deceptive appearance. It looked disappointingly dull; it bore an unfortunate resemblance to a reproduction, and an inferior reproduction at that. Its romantic story had been re-told at some length in all the current journals. It had received the publicity due to its historic vicissitudes. In a purely topical sense it made news, seeming, in a way, to confirm the reality of that Imperial character which the Crown was soon to attain. But the pasty lump which glimmered in an ill-lit setting and was hopelessly outshone by the iridescence of the Hope Diamond was the cause of considerable and ill-disguised disappointment. Even among the specialists some doubts were instilled; two juries were quite convinced that the exhibit was nothing but a paste reproduction, and an anxious consultation took place among experts and officials. It resulted in the Koh-i-Noor being re-displayed; this time against black velvet and illuminated by gas.

There were of course British minerals, a taste more for men than for women who showed relatively little interest in Blacklead from the Cumberland mines, slate from the Honister quarries, Mundic and Galena of mysterious sound, and innumerable lead ores, and outside the western end of the building stood the blocks of stone that were too heavy to move: colossal lumps of coal; Steam, Cannel and Anthracite.

The melancholy reflection that

> "Art stopped short in the cultivated court
> Of the Empress Josephine"

is brought home with peculiar force when we indulge in the luxury of a tour of the imagination through the aisles of the Crystal Palace; the fine arts of 1851, examples of the bastardisation of taste without parallel in the whole recorded history of aesthetics, have come off badly.

Gas Lamp and Bracket by Winfield of Birmingham . . . "one which, we understand, has been purchased by the Queen, a fact that supersedes the necessity of any further reference, as it bears ample testimony to the excellence of the work : the figures introduced are of parian."

Art Journal.

Victoria and Albert Museum

UNITED STATES SECTION

They were for one thing the productions of an epoch in which design in art tended entirely to obliterate functional value by the addition of superfluous, allusive or meaningless decoration; they have not unnaturally come to represent classic examples of the hideous and the debased. And if any lesson is to be drawn from the Great Exhibition solely with reference to taste it must be that design in the hands of a machine-minded, money-seeking generation tends to take a downward curve, losing its purpose in a senseless smother of irrelevant detail.

To these results there were certain contributory causes. By a rare combination of chances bourgeois and not aristocratic tendencies were prevailing. From the court downwards, the keynotes were respectability and prosperity under the flourishing aegis of progress. In France, no less, a monarchy of bourgeois leanings had symbolised middle-class aspirations. Whether in the novels of Balzac or the portraits of Ingres the note is there with its insistent echo: "Enrichissez-vous."

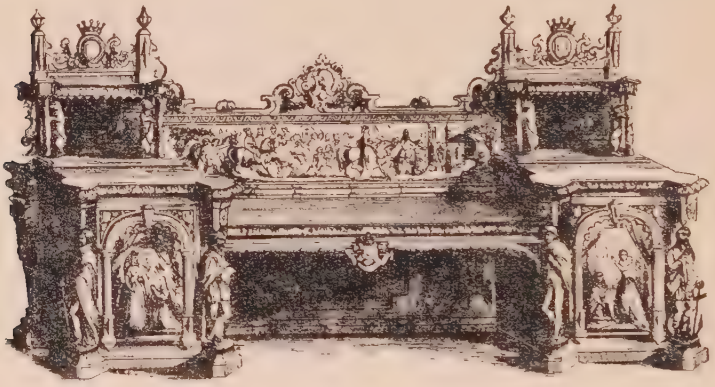
That this advice was followed is scarcely surprising. It is merely depressing to see the result of middle-class taste in the mass let loose in such quantities and all at once. It proves the importance of the aristocratic element as the ultimate arbiter of taste. 1851 is the first collective opportunity for assessing the damage done to the arts in one generation alone of philistine freebooting; it marks the high-water of hideosity.

Taste inclined to a perversion of the *cinque-cento;* the purely confused. The Romantic Movement was by no means dead. What grander opportunity than this for a century steeped in aims and ideals no matter if occasionally unattainable. Poets and artists had pruned a tree a generation earlier; the branch was now heavy with fruit. It turned out monster specimens; fruit not of art but of its half-brother industrialism.

Ralph Nicholson Wornum in his Essay on Ornamental Art,[1] was already at that time quite clearly

[1] *Art Journal.*

of the opinion that the Exhibition contained nothing new in ornamental design; that there was "not a scheme, not a detail that has not been treated over and over again in ages that are gone; that the taste of the producers generally is uneducated", and that in nearly all cases where this was not so, the influence of France was paramount in the European productions. Also, that the favourite style of the day—assuming the Exhibition to reflect contemporary taste—was that of the mixed cinquecento or Renaissance.



The Kenilworth Buffet

"Any attempt to describe this elaborately carved piece of workmanship, would, in our limited space, be out of the question."

Art Journal.

The feeling for classical lines had almost entirely disappeared. Apart from the symmetrical productions of Wedgwood and Flaxman, there remained only the Etruscan display of Messrs. Battam; grouped in a grotto of which the contents were slavish reproductions of their classical originals.

So the great harvest of the Romantic movement was being celebrated in its own temple; this was its first ecstatic festival. One glance at the Illustrated Catalogue is enough to convince. Here, brought to its

final state of bathos, reduced to the totally absurd, is one distressing symptom after another. If we look, for example, at Exhibit 110 we shall see that it is called *The Kenilworth Buffet.* As a specimen of domestic furniture it is monstrous; combining all the volubility, the sentimentality, the realism of its epoch in addition to that passion for self-deception to which the nineteenth century was so addicted. The buffet is made out of a colossal oak-tree cut down near Kenilworth Castle, and in a praiseworthy effort to enshrine the skill of native talent, its proprietors have commandeered local wood carvers to execute the massive sideboard depicting scenes from the Kenilworth Pageant; episodes ornately carved from the story of Amy Robsart and Leicester. Scott and the Romantic movement are everywhere. A little further on the subject of Exhibit 113, taken from *The Antiquary*, is catalogued as *Aldobrand Oldenbuck's Cabinet.* This, it is true, bears a certain relation to modern industry with its allusions to the art of printing. It is soberly instructive, and the age loved to instruct. Aldobrand is represented at the top of the cabinet, flanked below on either side by his friends, Luther and Melancthon. An inlaid panel shows the journeyman printer taking off his first proof.

There was an inordinate amount of "ladies' needlework". Crowning it all was the great carpet in Berlin wool worked for presentation to the Queen by the Lady Mayoress and one hundred and fifty other contributors, but there was some dismay at the amount of embroideries, crotchet-work, tapestries, artificial flowers and flouncings, tea-urn mats, bead-work and antimacassars, even if their survivors happily give cause for some pleasure among collectors to-day.

Of all the so-called works of art exhibited in the Crystal Palace in 1851, only one group can possibly be said to qualify for serious consideration. In the British section at any rate, the hand of Augustus Welby Pugin is inspired enough to touch the future,

and of all his fellow contributors he conforms least to type.

Pugin was chiefly responsible for the curiously named Mediaeval Court; a section admired, even enjoyed, albeit with the sour grimace of disapproval. Already on the verge of insanity, driven by ecclesiology into the traditions of the Middle Ages, he worked on lines of his own admitting of no concessions. Under his guidance something is evolved of the perfect teamwork visualised by Cole for his art manufactures; that of the renaissance of craftsmanship. In the Mediaeval Court the idea of the composite art-workman is realised through Pugin's inspiration, in Crace's furniture, Hardman's stained glass and metal-work, Myers' carving and Minton's encaustic tiles, seen together as a composite whole.

The necessity for Pugin's presence as a cultural influence in the Great Exhibition had been already realised, yet dreaded by some with considerable suspicion. Some weeks before the opening the extremer protestants took fright. Already in March Mr. Kinnaird[1] had written complaining to Lord Ashley that a crucifix was being ostentatiously displayed by Pugin, by which he meant that it had been placed sufficiently high to dominate the surrounding exhibits. He asked that it might be taken down. The fact was that Pugin and his four colleagues had hung the court on one side with ecclesiastical ornaments. The other side was a storehouse of domestic furniture of gothic tendency, while in the centre of the court stood a confusion of stoves, fonts, *cache-pots*, sofas and foliated tables. Doubts, however, refused to be so conveniently allayed, and a beneficed clergyman, describing himself as a peaceable man not given to controversy wrote indignantly to *The Times* that his spirit had been roused by this new insult to the religion of his country. He demanded action.

[1] Arthur Fitzgerald Kinnaird, the philanthropist. Later 10th Baron Kinnaird.

Such a development was distressing. Lord Granville to whom the correspondence was ultimately referred by Lord John Russell felt alarmed at the possibilities. The last thing that either he or the other Commissioners wished to see was a fresh flare-up of "No Popery" at such a moment, knowing as he well did

Vase by M. Vittoz.

that the result might deprive the Exhibition of some of its most shining ornaments. In the end diplomacy won. Prolonged negotiation resulted in Pugin agreeing to lower the Cross and place it in a corner, in which it can be clearly seen in the picture reproducing the Mediaeval Court.

If one is to look anywhere within the Crystal Palace for a line of succession in art forms, it is here that it

will be traced. And by the end of the century the heirs of Pugin may be counted by the dozen, begetting their successors to the arts and crafts. Ruskin, the heir presumptive, links hands with the pre-Raphaelites, and Cole's ideals will in time be fulfilled at Kelmscott. Out of it all develops the exotic foliage of the aesthetic movement. Thirty years after the Great Exhibition a new generation of Englishmen will flock to the Savoy Opera to relish one of Mr. Gilbert's most significant jokes: a young man who will walk down Piccadilly with a Poppy or a Lily in his Mediaeval Hand. It is a new public. The age of simplicity is over: it has not survived the rectitude of the Prince Consort. The post-1851 generation has already shed some of its innocence; none of its buoyancy.

CHAPTER XIV

COMING INTO THE CRYSTAL PALACE AT THE FAR END of the eastern nave, the entrance lying level with Knightsbridge Barracks, a visitor would have found himself right in the midst of the United States; a roomy section but perhaps a little melancholy with its suggestion of the prairie waste. There had all along been an unfortunate miscalculation as to the amount of space likely to be required: the American commission had originally applied for some 40,000 feet—room at any rate in which to spread their exhibits. This amount had been reserved, curiosity being not unnaturally whetted in consequence. But the result, added to disappointment, provided an ideal opportunity for exercising that type of uncharitableness which the promoters of the Exhibition had hoped so ardently to banish.

To begin with it must be conceded that the United States' contribution made, on the whole, an unfortunate effect. Pyramids of soap, varieties of milk-churns and alarming lethal weapons were utterly incapable of satisfying tastes which had been stimulated by voluptuous French interiors and elegant Viennese furnishings. She had above all made the initial mistake of applying for far more space than She could possibly fill. Yet in the light of future events, events which would reverse the industrial position within the cycle of a century, a glance at the type of goods America was exhibiting can hardly fail to be of general interest to-day. The United States Commissioners sent over in 1851:

A collection of fossils: some 6,000 specimens.
Ores.

Various mechanical instruments.
Some patent meat biscuit.
Churns of various types.
A mammoth double-action grand pianoforte, to be used by three or four performers simultaneously.
A Piano-Violino.
Furniture.
Soaps and other miscellanea.
Some collapsible bedsteads; patent and impervious to vermin.
India-rubber.
A stuffed buck-eyed squirrel.
A case of stuffed and prepared animals, birds and fishes.
A very ingenious little instrument for turning the leaves of music.
Sculptures.
Examples of binding, printing and paper; stationery.
A new phonetic alphabet, "The Aubaot".
Horology.
Agricultural produce.
Dageurrotypes and Hyalotypes, and so on.

It was perhaps not very much considering the extent of the country and the population; it was a sizeable collection seen as the contribution of a nation with not yet a century of history to its credit. The initial mistake had been the rather boastful application for space; the result was in the nature of an anti-climax which the press, thoroughly irritated, were not slow to rub in. Their general attitude was summed up by *Punch*, whose blows at the young pretender lived up to its name:

> "We could not help, however, being struck by the glaring contrast between large pretension and little performance, as exemplified in the dreary and empty aspect of the large space claimed by and allotted to America. An enormous banner betokened the whole of the east end as devoted to the United States; but what was our astonishment, on arriving there, to find that their contribution to the world's industry consists as yet of a few wine-glasses, a square or two of soap, and a pair of salt-cellars! For a calculating people our friends the Americans are thus far terribly out in their calculations."

Our friends the Americans nevertheless finally yielded to good sense, giving up redundant gallery-space, and conferring a universal benefit in the form of seating space for footsore and exhausted visitors.

Among their most striking mechanical exhibits they showed a sewing-machine, simple and small, not exceeding 1 foot square, worked by one small girl, and turning 600 stitches a minute. It had already been in use in New York for the making of sacks and pantaloons. Within ten years it was to prove its value strategically. But for the uniforms turned out by the thousand to clothe an inadequately equipped civilian army of New York clerks, the civil war might have had a different conclusion; the sewing-machine turned the scales as well as the seams.

Another exhibit, a *Patent Bell Telegraph*, was recommended for use in hotels and clubs. It claimed to register each call by a signal on the dial; each separate signal remaining exposed until answered by the servant. This, too, survived to prove its usefulness, although to-day presumably on the road to obsolescence.

Then Colonel Colt submitted his impressive collection of revolvers, and there was a prolific crop of soap. Soap used by Jenny Lind; soap in colours, soap transparently contrived to imitate a stained glass window. Soaps moulded into busts, pyramids, statuettes and other ornamental forms. Soaps in words, in letters, in flowers and devices. In addition to these stimulants to hygiene there were tooth-washers and dentifrices.

There were also papier-mâché chairs; "noticeable for their size and elegance," and reclining chairs "so constructed[1] as to admit of any position of the occupier of them, from the most erect and stately posture to absolutely horizontal lying."

Then, too, the United States, true to an instinctive and evidently indigenous impulse, exhibited an

[1] Hunt : *Handbook*.

air-exhausted coffin guaranteed to preserve loved ones from natural decay; thus claiming a number of advantages over existing methods of burial such as the facilitation of long-distance travel, immunity from decomposition, and protection from the attacks of animals. Reflecting on this, well might Tennyson seem to despair of interpreting the conflict between man and nature:

> "So careful of the type? but no
> From scarped cliff and quarried stone
> She cries 'A thousand years are gone:
> I care for nothing, all shall go.' "

Yet of all the American exhibits the most popular was the statue of the *Greek Slave*, by Hiram Powers, a young artist living in Florence, who seems to have been unknown to his countrymen until the popularity of his marble figure made him one of the chief lions of the Exhibition.
It was without doubt one of the least meretricious of the statues in the Crystal Palace.

For a time a certain tension seems to have prevailed between the United States and her British cousin. This was on the one hand brought about by an unfortunate attitude of American boastfulness; on the other by an attack of that distressing jealousy so often noticed in older men towards younger, more promising rivals. Certainly this tension was not lessened by the controversy over the Bramah lock.

Since 1811 the eminent firm of this name had, in front of their shop in Piccadilly, put out a large sign displaying one of their famous padlocks; at the same time offering the sum of 200 guineas to the first 'artist' who could make an instrument capable of picking it. Now the Bramah locks, like those of the Messrs. Chubb, for long regarded as synonymous with security, had enjoyed so great a reputation that no one had ever dreamed of disputing their supremacy, much less of taking up the challenge. No doubt the Messrs. Bramah, forgetting that business no less than

nature consists largely of the survival of the fittest, had dropped off to sleep for forty years on the prestige of their famous lock. Their sleep however had an abrupt awakening.

One morning in 1851, during the season of the Exhibition, into Bramah's Piccadilly shop strolled an American exhibitor, a Mr. Hobbs from Louisiana. He casually pointed to the signboard outside and informed the management that he had come to pick the lock and claim the reward. Notwithstanding that the lock, an obsolete model, was now over forty years old and correspondingly rusty, he was allowed to proceed. In due course he set to work. After fifty-one hours of work spread over nearly a month—under conditions ideal and inaccessible to the most experienced burglar, it is only fair to say—Mr. Hobbs working undisturbed in a room "with a trunk full of tools"[1] had made sufficient inroads on the lock for the summoning of arbitrators, under the rules of the challenge. By the end of the month the lock was picked, the reward claimed, and the conquering Hobbs turned his attention to the Messrs. Chubb whose locks he treated to the same indignity. In other words he challenged the reputation of the two most highly esteemed British safeguards to property.

Away in America the contest had been closely followed. The Hobbs lock, exhibited in the Crystal Palace, was, not unexpectedly, considered to be the victorious specimen. An important reward was consequently looked for: the Council Medal, no less. That this was not forthcoming was the cause of considerable ill-feeling; bringing with it accusations of undue partiality, discrimination and intrigue.[2] It was felt that decided injustice to an American had in this case been shown; hints were thrown out of outside influence exerted on jurors by British and

[1] *Treatise on Fire and Thief-proof Depositories and Locks and Keys.* By G. Price. London. 1856.

[2] *The Bramah Lock Controversy,* 1852.

French locksmiths, while United States' opinion showed itself sensitive to the slightest offence; as for instance in such a childish outburst as that of a certain Mr. Rodgers:[1]

> "The crowning triumph of American genius may perhaps be found in the amended temper of the English press, since they have been forced to admit our supremacy in mechanical skill, whether tried on land, in the lists of Hyde Park, or on water with the *Baltic* and *America*[2] . . .
>
> ". . . Reflecting men will not fail to note the gigantic proportions of American productions, when set down beside the last efforts of British mechanism. Boasting less of the results than of the means displayed to achieve yet greater works, we are satisfied with pointing to what *The Times* once sneeringly designated as 'mere machinery'. Our instruments are made to act where wider elbow room and less labor are afforded; our steamships and pleasure yachts tell of longer stretches to be spanned. . . . For the magnitude of our enterprises John Bull has more wonder than sympathy. Our pieces are adapted to a larger theatre. American agricultural machinery would presently turn half their farm labor adrift. The American steam navy is a prophecy of the disuse of many a long-lived Indiaman or slow-paced South Sea Trader; and to our clipper fleet all the British sea-craft will have to give way. To Americanize British land and sea machinery would half revolutionize Britain. . . . At least so says Yankee vanity; what if its chest does swell a trifle at our blushing honors?"

But here again Horace Greeley of the *New York Tribune*, one of the American Commissioners, eventually managed to restore the balance of judgment. He declared that the British press had indeed begun by creating a general impression that the American side of the Exhibition was a mortifying failure, but that subsequently the tide had turned, and American exhibits appeared now to be in danger of extravagant

[1] *American Supremacy at the World's Fair* By Charles T. Rodgers. Philadelphia 1852.

[1] The yacht *America*, which in 1851 was the first winner of the International Silver Trophy, afterwards known as The America Cup.

exaltation. "The Truth", he continued fairly and sensibly,[1]

> "lies midway between the extremes already indicated. Our share in the Exhibition was creditable to us as a nation not yet a century old, situated three to five thousand miles from London; it embraced many articles of great practical value, though uncouth in form and utterly unattractive to the mere sight-seer; other nations will profit by it and we shall lose no credit; but it fell far short of what it might have been, and did not fairly exhibit the progress and present condition of the Useful Arts in this country. We can and must do better next time, and that without calling on the Federal Treasury to pay a dollar of the expense."

And on this sensible and magnanimous note ended an undignified wrangle. It called to mind the remark once made to Cole by the sagacious Mulready: "The great object in working the Exhibition appeared to be not to *do*, but to prevent somebody else doing—and that there was a speck of this feeling everywhere."[2]

* * * * *

After Great Britain, the largest single contributor to the Exhibition was France, whose collection of exhibits was huge, particularly of articles appealing to taste, fancy or luxury. She showed Sèvres porcelain and Gobelins tapestry; chemicals and carpets; machinery and metals; musical as well as philosophical instruments. Arms, furniture, jewellery, and gloves; decorations and bronzes; plate and lace; photographs and printing.

Works in precious metals were strongly represented, though an edifice in silver like Durand's *Fontaine de Thé* appears like a top-heavy crown on the summit of vulgarity; a pretentious and useless waste of one of the nobler metals. Another shining example of total uselessness was an imitation of a folded napkin, in frosted silver, on a dinner plate. But at the time, these

[1] *Glances at Europe*, 1852.

[2] Cole : *Fifty Years of Public Work*. Vol. I., 193.

objects drew a great deal of genuine admiration; just as genuine and enthusiastic as that aroused by the Queen of Spain's jewels exhibited in the nave by M. Lemonnier, a Paris jeweller.

Interior decoration received considerable attention. French fittings were all magnificently encrusted with every known and unknown period style. But perhaps one of the most curious of all the French exhibits, certainly among the most delicately wrought, was the stand showing a display of trinkets all worked in hair. This culminated in a large tableau portrait of Queen Victoria, surrounded by wreaths, baskets, ciphers, bouquets, even landscapes; all in the same medium, and entirely, it is alleged, without the aid of gum.

Daguerreotypes, Talbotypes sometimes called Calotypes, and the other early photographic processes had all the charm of mystery for the exuberant explorers of the new age of science. *Sun drawn pictures*, simultaneously developed during the 'forties by Daguerre in France and Fox Talbot in England, were in all the charm of their early freshness and spontaneity. Altogether some seven hundred photographs from six countries were exhibited. For that matter very many photographs were also taken during the Exhibition of its interior as well as of its exterior, of immense interest from a documentary point of view; although unsuitable for purposes of decorative illustration, since with little experience of montage results are apt to be unimpressive. France was also the sponsor of a prototype submarine which had travelled from Creusot to London under its own power, submerging at Calais and surfacing at Dover.

Austria had sent over a superb collection of glass, furniture, precious works in gold and silver; silver plate, inlaid floorings; small or luxurious articles of personal use such as whips and walking-sticks; umbrellas and carved chessmen; card-cases, pin-cushions, tea-caddies and porte-monnaies; objects in ivory, bronze, tortoiseshell and horn. Residues,

in fact, of the great legacy of the mediaeval craftsman.

Chiefly, however, on account of her territorial domination in northern Italy, she appears to have excelled in sculpture, as regards both zeal and sentiment. With those from Germany her marble and plaster statues swamped the Exhibition: endless allegorical groups and figures told their stories with sugary reiteration. Children and cupids tumbled about in unrestrained profusion, and statuary exhibits from Austria aroused such enthusiasm that barriers had to be erected round them in order to control the crowds pressing forward for a better view of such exhibits as, for example, *Candour*, representing a child and a dog; *Innocence*—a boy bitten by a viper; *A Soul Ascending to Heaven*—"giving a good idea of flying";[1] *A Young Girl with a Nest of Cupids or Amorets; Cupid sharpening his Arrows; Jepthah's Daughter.* Particular favourites with both the public and the critics were *The Veiled Vestal* and the *Circassian Slave in the Market*, both worked in Carrara marble, both object-lessons in insincerity as well as in painful fidelity to exactitude.

> "The folds of the veil are so truthfully sculptured, and the features beneath so delicately shown, especially in the first named figure that the spectator's eyes . . . cannot believe it is opaque marble, it must be transparent gauze."

admiringly comments Hunt's instructive handbook.

With regard to German exhibits, among some of the most important in the Exhibition, it is hardly possible to class them as coming from a single country. The chief contributing unit from the Exhibition point of view was the Zollverein, which for economic purposes united the states of Prussia, Bavaria, Saxony, Würtemberg, the two Hesses, Thuringia, Baden, Nassau and the Free City of Frankfort. These represented a total population of 25 millions, equivalent to that of the United States during the same year. The

[1] Hunt: *Handbook.*

contribution of German States outside the Zollverein was negligible.

A large section was devoted to the display of metals, the various stages and processes in their manufacture being shown from start to finish, concluding with the famous ornamental iron castings of Berlin. Works in precious metals were conspicuous; so were jewellery and furniture, and the old German, the Knüttel style received the meed of admiration accorded to everything referring to the prevailing confused Gothic. One exhibitor was showing what he described as "Paxton furniture".

"Professor Rietschel of Dresden exhibits his bas-relief of *Cupid on a Panther* whose headlong flight has alarmed the youthful god, and disarranged his arrows."

Art Journal.

Particularly admired was a round table of rosewood, finely inlaid with mother-of-pearl, metal and ivory, having in its centre a portrait of Shakespeare surrounded by scenes from *King Lear*, *The Merry Wives of Windsor*, *A Midsummer Night's Dream*, *Romeo and Juliet*, *Richard III*, *Henry IV*, *Coriolanus*, *The Merchant of Venice*, *Hamlet*, *Othello*, *Macbeth* and *Richard II*.

A very large assortment of smaller wares and valuables was exhibited. Porcelain from Meissen, otherwise Dresden china, was on show in the Octagon Room. But perhaps the most characteristic of the

Victoria and Albert Museum

THE TRANSEPT AND CRYSTAL FOUNTAIN

smaller German wares, and among the collection of trays, bird-cages, gilt frames, flower stands and fancy goods in papier-mâché, were the Würtemberg toys, a speciality. They can hardly be expected to have appealed exclusively to children; for adults too they had a special attraction in their representation of miniature groups of animals aping mankind; little commentaries on daily life interpreted by close observation of animal types. Episodes in the life of Goethe's *Reinecke the Fox* contained all the humour of the early Disney satires on humanity. So, too, a marten as pedagogue instructing four young rabbits as pupils; a weasel nursery-maid exercising her young charges; a tea-party of cats entertained by another at the piano; moles and dormice fighting a duel.

The contribution from Germany was considerable, but taken all round it was, excepting for its large section devoted to metals and their industries, one more concerned with aspects of craftsmanship than of industry. A few more years and this would all be changed; modern inventions would take the first place. In 1851 practical novelties are relatively few. Lucifer matches and sheets of raised metal letters for helping the blind to read, are tentatively shown. Printing is highly advanced; so too are musical instruments. But in the main Germany was still a store-house of domestic craftsmanship and the finer arts. Carving and modelling were the fashion, and Prince Albert's brother[1] had sent over a set of fruit-stones minutely carved by himself with a penknife.

Most popular of all was J. M. Farina's fountain of *Eau-de-Cologne*, which played continually throughout the whole run of the Exhibition, and into which handkerchiefs were freely and repeatedly dipped. Of this and the fountain of *Acqua d'Oro*, 270 gallons were distributed among the public.

Switzerland was an exhibitor of wood-carvings and carved furniture, small wares, some filigree and gold

[1] Duke Ernst of Saxe-Coburg-Gotha.

work; and of course Swiss watches were prominent, the firm of Patek alone showing seventy-one, though several other clock producing countries also contributed to the Horological Section, the more important being France, the United States and the United Kingdom. Swiss contributions were, all the same, by far the most skilful and ingenious; the French the most elegant in taste and design, and the United States submitted the most useful and cheap examples of mass production, excellent as time-keepers and in reliability. The British exhibits in this department were on a large scale and of first-class quality; astronomical clocks and chronometers by Gowland, Parkinson and Frodsham were highly praised. In glass England showed some superiority. Osler's of Birmingham, one of the principal exhibitors, gave a spectacular display of cut glass, lustres and chandeliers.

Italy, a union of Rome, Tuscany and Sardinia specialised in cereals, cameos, mosaics and inlaid tables in porphyries, scagliola and pietra dura.

Russia showed superb raw materials and minerals. Malachite was the chief novelty, and the great green doors which consisted of between two and three thousand individual sections fitted together, were exhibited, among much else, by Count Demidoff.

Spain was the exhibitor of an inlaid table in mosaic, composed of three million pieces of wood; of agricultural produce, cigars, cheroots, and Merino wool from that precious breed robbed from her during the Peninsular War, and, once plundered, dispersed about Europe. Portugal was mostly limited to dried fruits, carved ivories, and a large collection of snuffs and toothpicks.

Persian and Turkish exhibits were sources of curiosity, and showed examples of oriental seclusion which so fascinated by its sense of mystery. Hookahs and narghilehs were shown with coffee sets and Turkish Delight.

Greece sent her marbles and porphyries, dried fruits and honey; and replicas from portions of the Parthenon frieze.

Egypt had chiefly dispatched vegetable and some animal products. Orange-flower Water, Rose-Water of Fayum, and baskets and brushes made of date fibres.

* * * * *

Among the curiosities in which the Exhibition seems to have abounded were freak inventions of no value whatever excepting to illustrate a certain wayward if charming optimism in human nature. Exhibitor 190, anticipating the inventive genius of a Heath Robinson, showed *An apparatus of peculiar construction, showing the Rise and Fall of Tides.* We are grateful for the opportunity to read about it; unlike Mr. Hunt who felt it would have been more friendly to have excluded it altogether. This, according to the inventor himself, is how the apparatus worked:

> "The article I sent to the Exhibition is an apparatus to illustrate the idea of the earth being a living creature encased in a shell, as a snail-house or a sea-shell, and by the action of its heart causing the tide to ebb and flow.
>
> "Press down the blower, and the heart (as seen through the glass that is on top of the shell) will contract, causing the tide to rise; let the air out of the shell, and the heart will expand, causing the tide to fall.
>
> "I want a patron that would enable me to show how the tide causes the rotary motion of the earth, which only poverty prevents my doing."[1]

Another exhibitor showed a bedstead adjusted mechanically to turn the occupier out of bed at any hour, while a third produced a set of false teeth fitted with a compound compensating swivel, enabling the wearer to yawn "without displacing both upper and under plates."[2]

The first slot machine for postage stamps was on

[1] Hunt: *Handbook.*

[2] *Ibid.*

view, "so arranged that on dropping in a penny the machine most honestly and conscientiously delivers one stamp."[1]

Then, too, it is tempting to speculate on the nature and use of the *Mechanical Figure* intended to illustrate the varying proportions of the human form, and constructed so as to expand "from the size of the Apollo Belvedere to that of a colossal size."[2] It was an affair of sliding steel and copper plates; of screws, nuts, bolts and springs. Within the figure, yet attached to the external plates were metal slides provided with projecting pins at their extremities. This Frankenstein's monster was enlarged or contracted by sliding metal tubes, provided with racks and acted upon by a combination of wheels, screws and slides; some seven thousand individual parts in all. It was felt that it might have an important future "providing clothing for a distant colony . . ." and that any establishment equipped with three or four such figures "would be sufficient to fit perfectly and without any subsequent alteration, the clothing of an army of several thousand men, at whatever distance they might be from the establishment."[3]

And there was *Anhydrohepseterion*, the ingenious little device, simpler than its name, by which a potato could be encouraged to stew in its own liquid. "The Potatoes being placed upon a false bottom, heat is applied, steam is generated, and this being confined by a secure cover, the whole is readily and perfectly dressed."[4]

In porcelain Mintons surpassed themselves in their efforts to prove worthy of the Exhibition and their own high reputation. The Victoria Dessert Service upon which Herbert Minton was so much congratulated by the great and good was an innovation combining porcelain with parian ware. This service

[1] Hunt : *Handbook.*
[2] *Ibid.*
[3] *Ibid.*
[4] *Ibid.*

consisted of seventy-two dessert plates, twenty compotiers, four jelly stands, four cream tureens, two round flower baskets, two oval baskets, two *assiettes montées*, four triangular flower baskets, salt cellars and stands, and two wine coolers. The whole service was in white, turquoise and gold with perforated borders, and centres of compartments painted with birds, cupids, fruit and flowers. Plates and dishes were in porcelain; the figures in parian. On the top of the jelly stands Cupids struggled together, "one to get at the sweet things beneath, the other holding him back with all the energy of an outrageously good child."[1]

No wonder that this exhibit caught the eye of the Queen, as, inspecting stand after stand, she paused not only to commend but actually to purchase for 1,000 guineas the Minton Service as a present for the Emperor of Austria. For her visits to the Crystal Palace were constant, regular and methodical. She went everywhere and saw everything. Each Saturday morning would find her with the Prince making a long and exhaustive tour of some particular section. She interviewed exhibitors, asked them questions, listened to their explanations. More often than not she surprised them by the practical nature of her enquiries. It appears that a manufacturer, an arms manufacturer too, unaccustomed to the experience, fainted away from the emotion of conversing with his sovereign. That she knew a great deal about everything she saw was remarked upon with some admiration by the press, and the *Illustrated London News*, that repository of the Exhibition's progress, knowingly observes that the illustration of

> "the industry of Lancashire, indifferent as it is, compared with what it might have been had Manchester done its duty, attracted more attention, and elicited more questions from the Royal visitors . . . than any other single portion of this department. It was the economic question that was evidently the leading idea in their minds."

[1] Hunt : *Handbook*.

It sometimes fell to the lot of Lyon Playfair to accompany the Queen on her tours. As a rule he conducted the royal children on a regular series of instructive visits in order to see that they should acquire some sort of general knowledge of manufactures. But if the Queen's tours were, to the exhibitors, invariably the source of hope they were more often the cause of despair. There is the case of the engraver on glass who had spent years working on a vase described as being divided into sections. Whenever the Queen came remotely within his direction his hopes rose of attracting her attention to his masterpiece. But time after time the royal bonnet was averted from the stall; the despairing artist was passed by unnoticed. It was Playfair who, touched by the effect of this repeated disappointment, the signs of dejection so plainly perceived on the downcast face, at last begged the Queen to turn back. Turn, in fact, she did. But now the exhibitor had lost his nerve; he was incapable of explaining the symbolism of his handiwork. With kindly curiosity the Queen enquired the meaning of a section representing a boy jumping from a boat on to land under the observation of the All-Seeing Eye which appeared mysteriously out of a cloud. "The Boy, Madam," replied the distracted exhibitor, "the boy is the Prince of Wales; the Eye is the Eye of God looking out with pleasure for the moment when His Royal Highness will land on his kingdom and become the reigning Sovereign."[1]

* * * * *

Anxious hours had been passed by the Commissioners in deliberating how best to protect the contents of their enormous bazaar. Colonel Reid, upon whom responsibility chiefly reposed, had at first wanted to surround the Crystal Palace with military *chevaux-de-frise*, and iron railings 8 feet high, but Owen Jones,

[1] Wemyss Reid : *Memoirs and Correspondence of Lyon Playfair.* VI. 121.

alarmed by the threat not only to the effect of his colour scheme but to the general pacific character of the building, had himself volunteered to design an ornamental iron railing. In the end police were preferred. Police wearing list shoes; police, so concealed as to astound a party of Russian savants wishing to see how the exhibits were guarded at night. For while they were marvelling at a casket of priceless value from Moscow, to all appearance unprotected, they found themselves suddenly surprised and surrounded by a force of constables, who sprang up, as it were, from nowhere, ready to arrest them. The Commissioners of Police, acting under Home Office authority, had left nothing to chance. On an average four hundred[1] constables were daily employed inside the Crystal Palace; thirty-six foreign and twenty-four provincial police with twenty-six interpreters completed the precautions. The Home Office had, all the same, resolutely stuck to its decision not to contribute towards the extra expenses. All of these were shouldered by the Commissioners, and the bill they had to meet was not, in the final event, a small one. Total expenses in connection with constabulary duties for the Great Exhibition amounted to £19,647 17s. 9d.

There were, of course, extra duties in connection with traffic, the flow of which near Hyde Park needed keeping constantly on the move, and remoter streets freed from congestion. London thoroughfares were choked with vehicles between the hours of 9 and 6, mostly with public conveyances; ancient, outworn and uncomfortable omnibuses, and decrepit cabs. Caught up, too, in this sluggish stream were the crowds of strangers uncertain of their whereabouts and prone to lose themselves. Yet freedom from street accidents was remarkable. Those in the neighbourhood of Hyde Park brought in rather less than twice

[1] Though on the first two 1/- days the number was stepped up to over 600 in order to cope with the extra crowds anticipated.

the amount of casualties to St. George's Hospital than in a normal year. Extra guards had to be found for houses in the neighbourhood of the Exhibition liable as they were to be exposed to extra risks through crime and other nuisances.

A police station had been set up at Prince's Gate just inside the Park; provided with cells, reinforcements and a telegraph installation for communication with the Commissioners of Police. In short, elaborate precautions of all kinds had been taken for the maintenance of law and order, so as to cover the possibility of any and every form of emergency. The Duke of Wellington's apprehensions had been partly anticipated by the augmentation of military strength in and around London. Provisions had been made against the depradations both of provincial and foreign thieves, and of shady characters in general, to identify whom special regulations had been introduced. Whether the methods adopted turned out to be as successful as one might be led to believe from the police reports, it would be hard to say. For in his correspondence with one of the Commissioners, E. A. Bowring reports the presence among closely-watched suspicious characters of a regular Fagin, "A gentleman who keeps a great training school for young thieves." Yet even so, not until the Exhibition had been open almost a month were any pickpockets arrested inside the building. And these, both women, were caught by the Belgian police. What is really extraordinary is that, when all was said and done, crime in 1851 turned out to be rather below the average. Fear of the activities of suspicious foreigners and of their effect upon the more disorderly element among the home population caused magistrates to prosecute with increased severity; yet here again, as with accidents, the reverse was surprisingly the rule. At the Central Criminal Court the Recorder of the City observed to the Grand Jury that the cases brought before him had decreased, and that among

those charged with robbery the name of no single foreigner had appeared.

The astonishing, the unexpected thing had after all happened: the great mass of the people behaved soberly, quietly and with decorum. There was it is true a slight increase in cases of drunkenness, assault, breaches of the peace, pocket-picking and larceny. The uttering of counterfeit coin was practised on a somewhat larger scale than usual, but it was still a minor item in the courts. Drunkenness, after all, was

Seat by J. and W. Hilton of Montreal.
Woodwork of black walnut, boldly carved; upholstery of crimson and gold damask.

looked upon as a somewhat seasonable failing. One which, in a time of rejoicing and excitement was apt to lead in most cases to assault, and this again to defying the police officers. There was a good deal of overcharging by cabmen and conductors of vehicles, and a good many cases of non-payment by fares.

What was of far greater interest to the authorities was that the returns did not contain a single case of sedition, conspiracy or unlawful riot. Indeed political agitators and offenders were conspicuously absent. Certain factors tended to induce good behaviour, the known increase in the police force, employment,

regular wages and abundant food. And these it was recognised were stronger agents than any other in political persuasion.

The great mass of British operatives and artisans, before whose arrival in London such apprehensions had been felt, showed their curiously vigorous sense of independence with regard to their choice of lodging. They had their own ideas about how and when to visit the Exhibition; they resented interference, and those well-meaning attempts by religious and educational bodies to organise them into groups. They preferred to choose their own private lodgings, and this appears on the whole to have been a satisfactory and reasonable arrangement. Certainly an organisation like the 'Mechanics' Home' failed to draw much patronage: its thousand rooms were never more than a quarter occupied at any one time. The Englishman, always individualist, preferred in those days to be his own manager.

CHAPTER XV

THE REALLY FASHIONABLE HOUR FOR VISITING THE Exhibition was late on a Saturday afternoon; attendance was then at its most distinguished level, there was room for moving about, for sitting down, for detailed inspection and for discussion, since the public consisted solely of holders of season and 5/- tickets. On Saturday afternoon there were seldom more than ten thousand visitors, a mere handful. If we look at one of the contemporary prints or lithographs, the individuals themselves can be discerned in all their variegated detail. The gentlemen whose parted hair and side-whiskers are glossy with Rowland's Macassar Oil are almost all wearing a loose sort of coat or paletot; stove-pipe hats, fancy waistcoasts, and light coloured trousers strapped under the instep. They advance politely, usually with a clinging feminine companion on each arm. Here, for example, is a retired officer; rather stout, rather florid, in a braided surtout, wearing yellow buckskin gloves and Hessian boots. The lady with him, though in outline demure and under the full influence of prevailing domestic sobriety, is nevertheless beautifully dressed; she has evidently lately returned from Paris. And though rich in material, her clothes are harmonious in colour. She wears a dress of spring green *gros d'orient*, the bodice of which is cut close to the figure and edged with *galons* festooned with darker green round the borders. Her sleeves are of three-quarter length, finished with four rows of festoons which again trim the three deep flounces on the skirt. They seem in fact like three skirts of different lengths, worn one above the other. All are decorated *en tablier* with

festoons and *soutaches*. Seen below the bodice is an embroidered cambric *chemisette*, the sleeves of which billow from under the green sleeves and are banded at the waist, leaving a small cuff.

Her bonnet with its open, rather large brim, is of pink *gros de Tours*, finished off at the edge with a rich, white-figured ribbon. Pink silk and white flowers trim the inner sides, and since the late afternoon is a little chilly, this lady, who is plainly a person of consequence, is wearing a long Barège cashmere shawl in one of the rich new designs introduced by Paris; copied, so successfully, by Paisley.

Hats that summer were either of Italian straw, or worked horsehair, in fancy patterns; delicate lozenge designs through which were threaded ribbons of gauze or satin. The monthly *Belle Assemblée*, bearing in mind that its readers will be visiting the Great Exhibition, describes one of the most admired hats as consisting of embroidery in straw and narrow green velvet ribbon, trimmed at the edge of the brim with two *volants* of *dentelle de paille*, drawn rather full, and traversed from distance to distance by *bouillettes* of green velvet. The *bavolet* was double; alternately of taffeta and straw. The interior of the brim very wide trimmed with sprigs of different flowers. It seems a complicated description for an elaboration of the poke bonnet, but it refers after all to a French bonnet. Whether Dundee was ambitious enough to include such a creation among the French millinery it was so intent upon showing, it would be hard to say.

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After three weeks a new public appeared. Admittedly, before May 26 all sorts of fears had been experienced with reference to the advent of the masses. Rustics, operatives and artisans as yet only partly emancipated from a background pullulating with untouchables were considered an unknown quantity. Doubts had been freely ventilated, lively

speculations of fancy indulged in as to the probable behaviour of the shilling entrants. They might not arrive sober; they might be rowdy; they might want to scratch their names on the glass prisms of the lighthouses; worse still, carve their initials on some of the priceless furniture. In the event they did nothing of the sort. On the first shilling day the Queen was there on purpose to see them arrive, and though, through Mayne's precautions, the police had been strengthened so that they almost outnumbered the visitors themselves nothing untoward took place. There were no crowds and no scenes. The great mass of people simply stayed away out of mutual fear of crowding, and only a paltry eighteen thousand put in an appearance, much to the surprise of the Commissioners. A day or two later they had overcome their fear and were flocking to the Crystal Palace in vast numbers, though always in great order and discipline.

Henry Mayhew, that invaluable observer, describes[1] the sense of awe and respect with which they entered the precincts; particularly the instinct for reverence which seemed to overcome them at the sight of all they felt themselves with their own hands to have accomplished. For to such as these the Exhibition appeared not so much a place of entertainment as of instruction; an experience in their lives, a lesson in achievement. Here, for the first time, they could see how ploughing might in time be considered as an elevated pursuit, or mining as a geological art. They saw how the agricultural labourer might be related to the chemist; the cattle breeder to the experimental physiologist. They were shown that mechanics' institutes and cheap literature might seem well enough, but that they were but partly useful if one aspect of knowledge only was reaching the working man. Science, alone of the humanities was descending to the workshop, the pit and the forge. Taste needed to

[1] *1851 : or, The Adventures of Mr. and Mrs Cursty Sandboys.*

be reinstated. In an earlier age it had been to a certain extent instinctive, handed down from manor through farmhouse to cottage; for there is relatively little difference save one of quality and refinement between the Chelsea figure and the sturdy Staffordshire group. It is a difference of delicacy and skill; not of essential thought or outlook. Since the development of the utilities a corresponding neglect of the beautiful had become the rule. The Great Exhibition was the first visible attempt to dignify toil and refine it by its appeal to self-respect, by collecting together specimens of scientific and aesthetic art in the hope that comparisons would raise home standards crushed as they were by what has been called "the iron age of the pre-Chamberlain midlands."[1]

For a decade past a gradual improvement in sanitary conditions had brought with it a corresponding decrease in crime and drunkenness; a rise in moral standards. The artisans who flocked in through the gates of the Exhibition were members of a self-respecting, conservative element, already enjoying a standard of prosperity a shade higher than that of the local curate or village pedagogue.

The new visitors were easily identified by their dress; usually occupational. Farmers and countrymen in smocks and cotton neck-cloths, green or brown wideawakes and high-lows, as well as artisans from the manufacturing towns marched heavily ahead of their parties carrying baskets, babies, or bulging cotton umbrellas. Women from Manchester and Glasgow wore bright coloured prints, and charity children in mob-caps and aprons were paraded about the aisles and galleries by instructresses of forbidding appearance. On certain days of the week by special arrangement came groups of emigrants on the eve of departure from England, perhaps for ever, brought there by the Philanthropic Societies. Special facilities were given to Charity Schools, Ragged Schools,

[1] D. Mathew : *Catholicism in England.*

Parochial Schools, National Schools. Schools for Foundling Orphans, Female Orphans, Sailors' Orphans and Coloured Orphans. For Jews' Infants; for the Deaf and Dumb; for Smith's Charity; for the Benevolent Society. For Blue-coat, Green-coat, German and English Schools; for the Tabernacle. For Lady Hallis's School and Colonel Buckley's School, and the establishment kept by a curiously named Mr. Phiblipart. All of these represent a mere surface sprinkling of the organised school visits; enough to witness that impulsive trend towards philanthropy which was sweeping the country with the indefatigable zeal of Mrs. Partington. Mention is even made[1] of the zealous activities of the Rector and Gentlemen of Bletchingley, who went so far as to send up a party of eighteen old people whose combined ages totalled one thousand one hundred and forty-one years. Although their impressions have gone unrecorded, the main sensation that they brought away with them was, it is hardly to be doubted, one of excessive bewilderment and fatigue.

There was a strong tendency among the shilling visitors to make a dash for those departments which showed them their own individual trade: Mayhew comments on their general lack of interest in the foreign nave, and their corresponding concentration on home productions; while in the case of the leisured classes the tendency had been to prefer the more exotic delights of the foreign section. Thus, he discerned countrymen gaping at agricultural implements, carpenters admiring specimens of well-turned mahogany; a railway guard hurrying off, japanned pouch and all, to the locomotive department; a blue-coat boy scrambling up into one of the lighthouses; farmers staring open-mouthed at model mills; and operatives swarming round the power-looms, the electro-plating and the diving-bell, running up and down the stairs of the model steam brewery, or pressing

[1] *First Report of the Commissioners.*

round the carriages of the moving pneumatic railway.

A very strong attraction seems to have been the impressive scale model of Liverpool Docks, a construction forty feet long of wood and paper, with its central strip of silvered glass for water and its sixteen hundred diminutive vessels, all fully rigged. This entranced the crowds; particularly those from Lancashire, familiar with the surrounding landmarks and local topography.

* * * * *

August 7 was a shilling day. Among sixty thousand visitors came a small girl, brought by her mother. She was at the time recovering from smallpox, but already alive to the meretricious attraction of that lavish style miscalled art which she was later to perpetuate in her flamboyant accounts of Second Empire rococo; a rather advanced child, it is true. A child already known to her family as Ouida, a precocious and pretentious child. She kept even then an account of all she saw in a copious and uninhibited diary, and her impressions of the Crystal Palace are so unsophisticated as to reveal the complete child of the age in her own spontaneous nature. "Went to the Exhibition, it is splendid," was her opinion,

> "though I admire the nave much more than the transept. I declare when the organs are playing and you hear them and look from the gallery it is beautiful, exquisite, I could not put down all the things I liked if I would but my *Illustrated London News* will give an account of them all and serve as a nice memory. There was a lovely little moving village there, beautiful it was, and oh the statuary too beautiful ! Powers' Greek Slave and a beautiful little veiled slave and several splendid statues and an exquisite ceiling with Byron painted on it. Splendid ! . . . What do I mean by saying I like the nave better than the transept, certainly the latter is much more beautiful, the building far more, but the nave is so fairy-paradisy-like

a looking place that when you gaze from the top to the bottom down the immense length it seems surely this cannot be built by men. . . . Oh, it was Eden itself. I wished all the people away no one to jostle against and I should have thought among those beautiful works of art that I had dropped from the earth on to the abode of fairies and Peries, oh, that silver and ebony inkstand with a deer and a fawn and the inkstands formed of stumps of trees all in chased silver—it did not look at all like what it was, it was lovely."

Now it would be hard to find another example of the purely visual effect of the Exhibition to equal this description by an imaginative child. So unrestrained, so enthusiastic, so true to period. To have gone on a shilling day at all must have been a humiliation for the future chronicler of high life; one of those select late Saturday afternoons would to her have been infinitely preferable. But although Ouida spent the rest of her life in obliterating the memory of her unpretentious origin, she was, at the age of twelve, in no position to choose; that she enjoyed her day at the Exhibition is certain, in spite of the crush. It was a warm business at any time; suffocating on sunny, windless days, and exhausting for older people. Staggered by so much human output, so many languages, such crowds and such opulence they were thankful when, at last, they could take in no more to be able to turn to thoughts of food.

Refreshments had been provided by the Messrs. Schweppe, who, having paid the Commissioners £5,500 for the contract, had then sub-contracted with two other firms. It was a profitable undertaking. The central, eastern and western courts had been reserved for this purpose, and even with an average consumption of 3d. per head, over £75,000 was taken, and the contractors' accounts revealed the fantastic amount consumed by an apparently ravenous public. Nearly a million Bath buns, 32,000 quarts of cream, 33 tons of ham, and 113 tons of meat are only a few

among the items mentioned; the rest are in the same spirit of good cheer. In the Central Court an elegant diet had been provided of sandwiches, pastries, patties, hot beverages and soft drinks, for the Commissioners very properly dreaded any suggestion of a tavern atmosphere, remembering only too well the mortifying experiences of the Horticultural Society.[1]

Dinner-time at the Crystal Palace.

By courtesy of the proprietors of *Punch*.

In the two other refreshment courts plainer and humbler fare was obtainable: cocoa, spruce beer, bread and butter, and cheese. No refreshments were allowed to be taken out of these prescribed areas, by order, nor indeed were any to be taken in. So as to minimise the chances of fire, all meats were cooked away from the building, and brought in cold. Potatoes

[1] The Horticultural Society had provided wine at their meetings, with embarrassing consequences.

might be steamed, with steam supplied to the contractors from the same source as that which drove machinery in motion. There was, all the same, no discoverable means of preventing the smuggling in of the discreet flask with the picnic lunch, by which means perspiring stout parties were to be seen refreshing their spirits on the red-covered steps of the plinths; munching sandwiches which oozed mustard, and littering the floor with their greasy wrappings.

Other side-lines also showed an agreeable profit. The General Account of the Receipts and Expenditure of the Royal Commissioners of the Exhibition of the Works of Industry of all Nations,[1] an absorbing document, makes rewarding reading. They had already refunded Mundays' as early as November 1850.[2] They had been able after the first three weeks of the Exhibition to repay the Bank of England the whole amount advanced by them. From receipts at the doors their takings had amounted to £356,278. Those arising from season tickets had totalled £67,514. Subscriptions had provided £67,896. They had run a profitable sideline in extras such as receipts from retiring-rooms, washing-places and weather-charts. Umbrella stands which had at first been discouraged proved no less remunerative. And the sale at a shilling apiece of token medals struck in the building, as souvenirs, brought in over £900. Then the Commissioners had contracted with Messrs. Clowes and Spicer for the distribution and sale of works relating to the Exhibition and its Building; of these no fewer than twenty-five had been printed: catalogues of various types and prices, guides, charts, maps and handbooks. The official catalogue, which had been confided to Dilke, turned out almost useless. Its compilation had not been easy since additional goods had been arriving from abroad long after the opening of

[1] *First Report of the Commissioners.*

[2] Compensation for loss of time, etc., having been referred by mutual consent to Robert Stephenson, M.P., he had ultimately fixed at £5,120, plus costs.

the Exhibition and were consequently not included. However as time went on a great deal more printed matter became available under official sanction. Catalogues at 1/- were on sale in English, French and German; a 6d. synopsis of the Building's contents in English and French; a 2d. popular guide, and two plans. Hunt's Handbook in two volumes; and the large Illustrated Catalogue in five parts made worthy memorials; these and an assortment of catalogues, indices, keys, covers, maps and plans brought the total of sales to nearly half a million. In the end, and after all liabilities had been met, the Commissioners found themselves with a profit on their hands. A handsome profit; its final figure amounted to £186,436.

* * * * *

In August the City of Paris gave a fête for a thousand guests from Britain connected in one way or another with the Great Exhibition. The story of their transit, officially arranged, loses nothing in the telling. A rough sea, and indifferent staff-work produced as much havoc among their luggage as it did upon their stomachs. Amid scenes of the utmost confusion, in which seasickness did nothing to restore composure, the guests, who included many of the Commissioners, the Lord Mayor of London, his City Councillors, and the so-called Mandarin He-Sing, themselves provided a comedy which entertained the public at home throughout the rest of that exhilarating season.

It somehow happened that during the cordial and flowery official reception at Boulogne two-thirds of the baggage was left behind; two-thirds of the guests arrived stranded in Paris after midnight and with no personal belongings whatever. To Lord Granville, who travelled separately, we are indebted for an entertaining commentary on the incident, in which distinguished visitors were seen, to say the least, at a disadvantage: Mr. Bowring wandering about the

streets of Paris in uniform; Lord Albemarle at evening receptions in a shooting-jacket. French hosts obligingly lent their wardrobes to their British guests; frequently with diverting results. Cole's experiences were in the region of high comedy, heightened if possible by his own rather pompous account:[1]

"Mr. D.—a juror—and his wife agreed to go in the same carriage with us. Mrs. Cole and myself breakfasted, and started from Notting-hill in ample time to get to London Bridge Station, for the special train leaving about 9. a.m. We called for our companions in Fitzroy Square. They were not down, and had not breakfasted! We made the mistake of waiting for them more than half an hour, and at last got off. When we arrived in Rathbone Place, D— found out he had left his keys behind, and we were obliged to return for them, and we arrived at London Bridge just in time to see the special train off, and thus lost all the comfortable arrangements which had been made for our reaching Paris as soon as possible. We, and others late, were accordingly mixed up with the usual foreign passenger train, and the luggage of everybody was sent adrift anywhere—some to Brussels, some to Paris, and some left at Boulogne, which so appalled the *Douane* in quantity, that they returned it to England, and some was found at Dover and some at London. No refreshments were to be found at Boulogne and scarcely anything at Amiens. We did not arrive in Paris till twelve at night, and could find no luggage. I had engaged a room at Meurice's, of which our companions took possession. At last, through the help of Mr. de la Rue, we got a little room to be in."

The next day a good deal of improvisation took place:

"Every Englishman and woman we met were in the same predicament. I had to borrow clothes; Mr. de la Rue, who was double my cubical capacity, kindly lent me a huge pair of black trousers, which were made to fit as best they could, and the only coat I could obtain was one from M. Meurice, with buttons under my shoulder-blades and tails coming down to my heels, which had

[1] Cole: *Fifty Years of Public Work*. I, 201.

been made in the period of the Empire. The appearance of almost every Englishman at dinner, was as odd as my own, but we sympathised in each others' misfortunes and the dinner passed off well and was of a superb kind."

This dinner was given at the Hôtel de Ville in honour of the Commissioners; an affair of five hundred guests, "accompanied", notes Cole, "by no fewer than sixteen changes of excellent wine." Lord Granville, the official British spokesman, replied in

THE UNHAPPY ALDERMEN,
having lost their luggage, are obliged to be rigged out in French clothes.

By courtesy of the proprietors of *Punch*.

his exquisite French to the complimentary speech of the Prefect, having been previously briefed on certain passages by the Prince who had prudently declined the invitation on the plea of health. Granville's comments on the occasion in his letters to England are pungent, noting the forlorn appearance of some of the Commissioners, and Cubitt, frightened out of his wits, and clinging to the tails of a stout sheriff. Dilke, on the other hand, who was "surrounded by Dilkesses, peculiarly made and curiously adorned" somehow

managed to be the life and soul of the company. The unpleasing appearance of the Aldermanic ladies Granville accepted as a grim but incontrovertible truth: "Our fair countrywomen are without exception monsters," he wrote home, "but all behave well."[1] The climax of the visit came a little later when the Prince-President, so soon to convert himself into an emperor provided his guests with a magnificent fête at St. Cloud, in superb weather, when, again, "the Aldermen, not exactly knowing the delicate distinctions of Parisian circles, drove him at last to his carriage by enthusiastic cries of 'Vive la République!'" Finally there was the reception by the British Ambassador, in which, says Lord Granville, Lady Normanby swallowed with great magnanimity "the bolus of Jurors we have administered to her." It is almost his final word on the whole subject.

[1] *1851 Commissioners' Records.*

CHAPTER XVI

As the summer lengthened and exhibition fever exceeded all hopes questions arose as to the future of the Building. What, in fact, was to be done with it? In June a pseudonymous pamphlet "Shall we keep the Crystal Palace, and have Riding and Walking in all Weathers among Flowers, Fountains and Sculpture?" had argued for its retention in Hyde Park as a palace for the people. The author, though veiled from his readers as "Denarius", was unable for long to conceal his identity; he was soon unmasked. At a public dinner Lord Derby in an innocent manner inquired if it were true that denarius were the latin for carbon, and Lord Granville in a burst of exasperation at the untimely appearance of the tract accused his colleague *Carbo* of breach of faith. Cole, in fact, had failed to keep his word, having promised not to publish without having previously consulted Granville. Still, it was a popular dish to serve; one with a peculiarly topical flavour. Sufficiently so for *The Times* and others to push forward. The arguments were plausible enough. Foreigners, it was pointed out, had their sun, their rivieras, their kursaals and their casinos. Unfortunate Londoners languished within doors from November to May, looking out upon murky thoroughfares, and for the most part unwilling to venture into their clammy parks, muffled in fogs and exposed to storms, wind and rain. Consequently, for the benefit of the aged and infirm, and of women and children, it became a question whether the Crystal Palace, now recognised as a public building, should not be retained by the government.

From the Commissioners' point of view the agitation was gratifying. Pledged as they were to return the site to the Woods and Forests in the condition in which they had first received it, they could themselves hardly have made the first move. Now only an act of Parliament could take the matter out of their hands and release them from their obligations, a favour for which they felt themselves unable to ask. This work the public would have to undertake. It was willingly performed. Popular feeling was overwhelmingly in favour of retention. There was scarcely any body of opinion against the scheme, with the possible exception of shopkeepers from whom a counter-attraction threatened to draw custom. Nothing, at any rate, could be done without the expression of public opinion which had reached a climax with Lord Brougham's petition to Parliament on July 11 to save the Crystal Palace. It was an extraordinary paradox. Brougham the implacable enemy of the Exhibition in Hyde Park now came forward in vehement defence of Paxton's Winter Garden. Less than three weeks later the House voted in favour of its retention until May 1, 1852. Time was gained for the accumulation of more experience, and the structure was to be under observation for yet one more winter season.

Colonel Sibthorp stuck to his guns; from first to last he opposed the motion. For though he had visited the Exhibition he still disapproved of it in principle and considered it his duty not to give it the least encouragement. Apart from this there was, however, little or no active dissent. London, like Titania had awakened to find her monster a miracle of beauty. Decked with flowers she had taken it to her heart; now she was loth to part with it.

Cole as usual had fertile ideas. He had a plan for Battersea Park. His idea was to transport the whole building there at the public's expense setting it up as a permanent Winter Garden and ornament to the banks of the Thames. It was a district at that time

considered as one of the blacker spots on the map of London. Battersea Fields was the haunt of low life, of gipsies, vagrants, and fortune-tellers; the site of pitch-and-toss, and the notorious performances of a Mr. Searle. Any inspiration likely to brighten its amenities was welcome. The Prince seems to have given it both consideration and support. "Battersea Park," he wrote to Lord Derby, with his usual grasp of detail, "is unoccupied at present, and easily accessible by water, steamers conveying people from the City at 2-pence apiece whilst the new bridge from Chelsea gives an excellent land approach, and a Winter Garden will be a great ornament to it. . . . A Winter Garden strikes me as the best use it can be put to."[1] A Winter Garden it speedily became. But not in Battersea Park. A company was formed in the spring of 1852; Paxton's glass house was purchased for £70,000, dismembered, and the materials removed to Sydenham where in due course and with considerable excrescences the Crystal Palace was reconstructed and enlarged.

* * * * *

During the final week official circles experienced some anxious hours. Record crowds streamed into the Crystal Palace, and on October 7, the fullest of all, a day when nearly 110,000 people passed through its gates—the Duke of Wellington took it into his head to pay the scene a visit of farewell. He had become remarkably fond of it. And although repeatedly, earnestly cautioned against going he had defied advice. He had provokingly insisted upon walking right up the nave at the very heart of 93,000 people. The most familiar features in England were instantly recognised; up from the crowd went a possessive shout. A moment later the old hero was being rushed and mobbed.

In distant parts of the building the uproar took on

[1] *1851 Commissioners' Records.*

a threatening significance; the collapse, long predicted, was believed to have at last begun; the alarm was raised. In the stampede for exits the first to reach safety were the sentries, and excitement was heightened by the overturning of a large stand of costly French china which came down with a crash. But the temerarious cause of the disturbance was carried out, pale and indignant, by six constables who had been shadowing him the whole time. So ended the only untoward incident in the five and a half months of the Great Exhibition. It closed its doors to the public on Saturday, October 11, in an unrehearsed demonstration. In the fading twilight, "God Save the Queen" was pealed out upon the organs, echoing, to a spontaneous accompaniment from the public, in and out of the dim arcades. For a further half-hour the air was filled with hats and hurrahs; tears were freely shed. The warning bell was ignored, and until nearly seven o'clock the building was not finally cleared. It was all very natural, very characteristic, very warm; as when at a farewell performance some favourite diva is called again and again while one by one the lights in the concert hall are turned down. For the public at least all was over. Only for those more intimately connected were there still a few days to be dedicated to the exhibitors and to their friends.

"Tomorrow", wrote Macaulay on October 14,[1] "I shall go to the final ceremony, and try to hear the Bishop of London's Thanksgiving, in which I shall very cordially join. This will long be remembered as a singularly happy year of peace, plenty, good feeling, innocent pleasure, national glory of the best and purest sort."

The day turned out to be both wet and depressing; it was chiefly an affair of adjudication and award. The jurors' reports were announced by Lord Canning; various honours were bestowed. Dilke, Cubitt, Fox

[1] *Life*, ii, 205.

and Paxton won a Knighthood apiece. Colonel Reid declined a substantial honorarium, and, along with Northcote, Cole and Playfair was given a C.B. Prince Albert took leave of his colleagues, of all, in fact, who had collaborated toward the Exhibition's success, and the proceedings closed with an interchange of becoming sentiments.

Colonel Reid himself had from the outset been against any attempts at effect during the closing ceremony. The combination of pomp with prize-giving struck him as incongruous, for, as he more than any knew only too well the final decisions of award were certain to awaken violent emotions. There were, as he had carefully pointed out in a letter to Colonel Phipps,[1] a great many objects of high merit which the juries had not even seen; disappointments would be in store for many, others would be indifferent; only the selected few would be elated. Therefore, from every point of view a simple ceremony was best. The Exhibition had succeeded beyond the dreams of the organisers. The great thing now was to preserve its success intact, not to ruin it at the last moment by leaving a bad after-taste. For some sort of after-taste was inevitable. Too many mistakes had been made, involving either conduct or negligence. In some classes the juries had committed irregularities; Horology was an outstanding example. In this class a juror was accused of having usurped the functions of his own jury, and of having bestowed awards on firms in which he was personally interested.[2] Other mistakes had arisen out of sheer incompetence. Troughton and Simms, a reputable firm of jewellers were made to suffer through this, and were inadvertently omitted from the list of awards to which it was agreed they were entitled. An entire state, that of Tunis, was the victim of an oversight and had received no medal at all. Here the special

[1] *1851 Commissioners' Records.*

[2] *Ibid.*

Commissioner for Juries had been prepared to allow the matter to slide by unobserved and not reassemble his committee. But the Prince Consort's rebuke was as strong as his conscience: "Better be just than comfortable,"[1] he had drily remarked.

There had been certain obvious decisions, meritorious beyond doubt, and unanimously approved. The Great Medal had been awarded to Paxton and the contractors for the Crystal Palace, the most original exhibit of the lot. It had also been bestowed on Prince Albert for his model dwelling-house.

But the regrettable aspect of the awards side of the Exhibition had been the flagrant misuse in certain cases of this, the Council Medal, the value of which according to both Playfair and Canning had been deliberately played down, and its significance distorted. Certain countries had even been led to suppose the Council Medal to have a different meaning from that which it bore in England. This and the varying interpretations placed upon it by different juries forms the subject of a memorandum[2] from Lord Canning accompanying a letter to Playfair. While its meaning is explicit, its allusions are discreetly veiled; particulars are lacking. Playfair had already referred to the principle on which awards were made, particularly "softening down the Council Medal as much as possible, and making it a peculiar medal."[3] It was a bad blot on the awards side of the Exhibition, and embarrassing to both men.

A brief analysis of the awards will show that among a total of 13,937 Exhibitors 164 Council Medals were distributed. The United Kingdom won 78 from among her 6,861 Exhibitors, while the thirty competing foreign countries, between them numbering 7,076 Exhibitors, were awarded 86.

British machinery swept the board with 52 Council

[1] Cole : *Fifty Years of Public Work.*

[2] *1851 Commissioners' Records.*

[3] *Ibid.*

Medals. France divided some 54 Council Medals fairly equally among her machinery, manufactures and raw materials. Other countries carried off few. Fine arts were almost ignored, there were four awards of which two were won by the United Kingdom, upon what grounds it is now impossible to say. Cole defended this by arguing[1] that the work of art which would have realised the highest price at a public auction was Gibson's *Greek Hunter*, but the point must have been hard to determine.

As a memorial to the occasion the Commissioners presented the participating governments with a complete set of medals, a copy of the Illustrated Catalogue, the Jury Report and some photographic records of the most important exhibits. They also collected Exhibition Trade Circulars, and fifty sets of these in sixteen volumes were bound and distributed among public libraries and institutions.

They had meanwhile appealed for a collection of articles for record to which exhibitors responded, and which, valued at £9,000, was temporarily housed in Kensington Palace, after the Exhibition had ended. Their work had been monumental. Little did they realise the store of energy which had lain concealed beneath their frame of glass. That they suspected it was of no common kind is plain from their comment on the conclusion of their labours:[2]

> "It will probably be long ere the impulse it has given to industry and civilisation will have reached its highest point; and it is not too much to hope that it may be ages ere that impulse will cease to be felt."

On October 16 the removal of goods was begun. The operation lasted over three weeks, and by November 11 the building was empty.

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In his diverting little book on the Crystal Palace Mr. Christopher Hobhouse didactically asserted that the Great Exhibition was an event of no importance.

[1] Lecture on the International Results of the Exhibition.
[2] *First Report of the Commissioners*, 1852.

This would have been bad enough, had not Mr. Roger Fulford, quoting it recently first expressed surprise, then, in a thoroughly non-commital sentence declared that it was nevertheless based on truth.[1] On what truth it would be interesting to learn.

To disparage the importance of 1851 is really a little too easy. It certainly failed in some of its objects, if this be what is implied by dismissing its importance, yet this is hardly synonymous with the sweeping generalisation that it had none whatever. That being the case it would be difficult to justify the approaching events connected with its centenary.

As a means of preserving international peace the Exhibition was indeed a mortifying failure. It might almost be considered to have acted like a stimulant to competition, and thus in the long run to war. Henry Cole in his lecture to the Society of Arts on the International results of the Exhibition of 1851 had gone so far as to conjure up a vision of politicians standing modestly aside while territorial differences underwent readjustments by peaceful merchants armed with economic agreements. "And I believe," he had gone on to say,

> "the Exhibition has opened the way to this kind of treatment—more reasonable, more civilised, less costly and more consistent with religious convictions, than the most scientific arguments of packs of artillery and squads of infantry, which in the long run do not settle any questions, or we should not see dynasties restored which we have paid millions to depose. Success in war among civilised nations, after all, now resolves itself ultimately into the length of the purse; and the length of the national purse depends upon the strength of the national industry. We are the richest people in the world, and, I fear, the most pugnacious, partly in consequence of our superior wealth. I think I may say, we have spent more for war than any other nation, and that we cannot boast of many practical results from our expenditure."

[1] *The Prince Consort*, IX, 225.

Cole ranked among the chief practical results of the Exhibition the revision of postal communications; the Reform of British Patent Laws by means of which inventors were temporarily protected against robbery of their ideas;[1] international hospitality, and the promotion of travel abroad among members of foreign countries.

He went on to forecast International Commercial Law, an international system of Weights, Measures and Coinage, and an international system of scientific classifications of all the materials, instruments and productions of human art and industry. Abolition of passports, International Copyright, and a revision of Customs and Tariffs were all anticipated by this energetic optimist. Not all of these beneficial results have come to pass. Some, like passport abolition, came to pass but not to remain.

In the event the most important practical result proved to be the drive toward better education; industrial education in particular, toward which the Exhibition contributed. The revolutionary processes which earlier in the century had been gradually reducing human labour to an economic level somewhere below that of its mechanical competitors had latterly been slowly readjusting themselves. Manual labour was gradually recovering a quality of its own; certain groups were finding themselves promoted from their former status of operatives to that of artisans: industrial artists, in fact. So, with the School of Mines already developing into a school of practical science the next step would be the foundation of an Industrial University, Prince Albert's wish; an object for international benefit and the eventual application of the surplus. "But," as Cole concluded in his lecture,

> "beyond every result, I trust that the Exhibition will have tended to make ourselves a less quarrelsome and meddlesome people with other nations than we have been accustomed to be, and will have taught us that our true

[1] Permanent Patent Law followed in due course.

policy in international disputes, should they unfortunately arise, is to stand on the defensive, and in that attitude to be as well prepared as possible, and to be content with being so."

Fanned by the breath of internationalism all sorts of subjects had been ventilated which, while not precisely connected with education as such were all part of the great act of faith in Progress. Thus, Universality was in the air: universal coinage had been suggested to the Prince Consort by the Archbishop of Dublin as a subject which might seem peculiarly pertinent, and the Prince had agreed in principle. Leone Levi of the Liverpool Chamber of Commerce, whose important work on Commercial Law had about that time appeared, had advocated a universal Code of Commerce among all the civilised countries; its mainstay was one language and one currency throughout Europe.

Less than two years afterward the nation was plunged in one of the most wasteful of its shorter wars. In this respect the Great Exhibition had performed nothing beneficial.

Economically, its consequences are still reverberating. Some time before its close it was apparent that the purpose of the Exhibition was in sight of fulfilment. Even before the distribution of awards a public outcry was being heard in favour of improvements in the general quality of British manufactures. There was also a burning question: what was to be done with the surplus? Even at this stage, and before the final settlement of accounts a considerable balance was known to exist. Well before the conclusion and inevitable dispersal of goods agitation was going on with regard to the foundation of some sort of institution which should house a great collection of specimen exhibits. No one could quite agree as to what was most desirable in this respect, and something on the lines of the French *Conservatoire des Arts et Metiers* appeared to be visualised. Of this institution Lord

Granville had formed no great opinion during his recent visit to Paris, adding that it contained nothing worth seeing.[1] This was not only a personal view; it was supported by the French Minister of Commerce who had confided to him his own doubt that it was of much practical value.

In England, meanwhile, a plan for the establishment of something similar was being advanced. The very fact that France was able to provide her working classes with an education greatly superior to anything available at home might, it was thought, help to explain why such a near neighbour could still maintain superiority in several classes of manufactures and design over British workmen. It might also help to explain why young Frenchmen who had passed their training were being sought out as technical specialists by almost all the great industrial countries in Europe. Here was the chance for England to exploit the lead she had gained in 1851 by establishing a great college for the instruction of her people, and a museum such as no country had ever inherited before.

The public had been made subtly aware of the educational destination of the surplus: it was now being unconsciously groomed into seeing its necessity. Playfair had sent up a kite by airing his own theories in the *Sheffield Memorial*, under cover of which he expressed his confession of faith in the guidance of public opinion in educational principles. He stated the case for providing the country with an opportunity for thinking out the subject of education, while at the same time preparing it for any plan in prospect. In short, as he wrote to the Prince, "it is necessary to promote skill and knowledge as an element of manufacture because the value of Raw Material as the other Element is constantly decreasing." But the Prince had turned a deaf ear to this as to other suggestions. Colonel Phipps stated as much to Playfair in his reply: "The longer the Prince

[1] *1851 Commissioners' Records.*

considers and weighs the subject of the disposal of the surplus," he wrote, "the more convinced he becomes that no arrangement for its appropriation can be satisfactory that does not include the interests of all the world."[1]

In August during a secret meeting at Osborne of the Prince Consort with Reid, Northcote, Dilke and Cole the Prince's Memorandum on the subject, with emendations by Playfair, was read out.

Between them they had evolved a plan for the centralising of the leading Learned and Artistic Societies upon a site somewhere opposite the Exhibition Building. It was a vague plan which involved immediate purchase of the necessary land. Four institutions based on the four divisions of the Exhibition were to be set up and governed by chairmen of the various Societies, but this idea after some ridicule was considerably watered down. Evidently the Prince had been once more giving way to flights of fancy. "Reid thought it quite impracticable," commented Cole in his memoirs "and everybody laughed at the idea of making the Antiquarian and Archaeological Societies 'commercial', moving them and governing them by the Statistical Society."[2]

The scheme came to nothing, and was eventually dropped. But at the same meeting Cole submitted a list of questions to Colonel Phipps on the details of the Prince's plan, including the liabilities and functions of the Societies, and the future of the Commission. The Prince himself filled in the answers, and a letter to Cole a few days later from his private secretary expounded the Prince's objective: Industrial Education. To this aim entirely the surplus was to be dedicated.

[1] *1851 Commissioners' Records.*

[2] In the light of present events, the Prince's scheme seems, after all, not to have been so ridiculous. The Scientific Societies who at the time insisted upon going to Burlington House are now complaining of insufficient room ; an eventuality against which the Commissioners had warned them. The question is once again coming to the front.

The material results of the Great Exhibition have in the event proved triumphantly successful in vindicating the Commissioners' policy. In the course of the following century their successors have seen the expansion and transformation of their entire estate. The great educational and technological centres which, endowed with schemes for scholarships have arisen at South Kensington are themselves the chief monuments to 1851 and form the legacy of the enterprise: The Victoria and Albert Museum, The Royal College of Art and Music, and the Rome Scholarships in the Fine Arts have thrown open doors on behalf of cultural education; the Imperial College of Science and Technology, the Science Museums and the Scientific Research Scholarships for the United Kingdom and Empire have done the same for science.[1]

The Commissioners had at the same time no powers to apply their surplus without a supplemental Charter. That winter they received it for the preparation of a scheme "in accordance with the expectations which were held out to the subscribers at the time their aid was solicited."[2] To this end a new Committee was set up.

In their Second Report the Commissioners had reviewed the activities of the United Kingdom in promoting Science and Art as evidenced by the many institutions supported by both the public and the State. They concluded with what was, however, their main contention:

> "We have confessed likewise, that . . . this is the only country which has neither supplied (in any practical or systematic shape) scientific or artistic instruction to its industrial population; nor, for men of science and art, a centre of action, and of exchange of the result of their labours, affording at the same time the means of establishing the connexion between them and the public which would secure permanent relations of reciprocal influence."

[1] See Appendix.
[2] *1851 Commissioners' Records.*

> "Yet this country, as the centre of commerce and industry of the world, would seem to require, more than any other, to have these wants supplied; and the Great Exhibition of last year has, in its results, convinced us that, unless they be speedily procured, this country will run serious risk of losing that pre-eminent position which now makes its strength and its boast."

They lost no time in taking measures to correct this danger. The first step had been the establishment in 1852 under the Board of Trade of the Department of Practical Art. At the end of the parliamentary session Lord Derby had introduced the revolutionary term, "Science and Art", into the Queen's Speech; in turn this became the title of the Department. Its functions were to administer centres of art, and to establish museums for the greater cultural benefit of all classes, and the sum of £5,000 was granted by the Treasury at the instance of the Prince Consort in order to acquire certain objects of applied art to be selected "without reference to styles, but entirely for the excellence of their art or workmanship." These objects were in fact chosen from among exhibits originally forming part of the Great Exhibition. Its first results were taking shape. The next stage was to assemble the collections. This assemblage was a gradual process; accelerated sometimes by a windfall, at others retarded by Governmental waste.

First came the reign of the Museum of Manufactures occupying the upper floors of Marlborough House; here were housed the original exhibits beside collections from the National School of Design. Henry Cole was in charge, who, with the Queen's permission ransacked the upper reaches of Buckingham Palace for precious specimens of Sevres china which was negligently scattered about the place, notably in the housemaids' closets. The Queen also sent some lace, carefully writing out the tickets herself. Woven fabrics, ceramics, woodwork, glass, furniture and metalwork were the keynotes to the collection, the

tendency of which was to accentuate taste in design, and "the application of fine art to objects of utility." It first became known as the Art Museum, then, abandoning pretence, Museum of Ornamental Art. Soon it opened an Art Library.

Meanwhile the Commissioners' plans were beginning to take practical shape. The surplus, solemnly dedicated to the cause of Science and Art was eventually invested in real estate. After great care and a good deal of skilful bargaining they acquired a site, some 87 acres of land in all, stretching due southward from the Kensington Road. To south, to west and to east they enclosed it, in 1854, with three great thoroughfares of their own construction naming them Cromwell Road, Prince Albert Road,[1] and Exhibition Road to the immediate east of which lay an excrescence of some 12 acres, which also formed part of the estate. Upon this site rests their cultural bequest to the world.

In 1857 the Museum of Ornamental Art left Marlborough House, and in company with its Art Library removed to its new home. It had already made considerable acquisitions. Paintings, sculpture, engravings, inventions of a scientific nature, animal products, building materials, geological specimens and an assortment of unclassifiable goods. The system of taking photographs, casts, and electrotype copies of objects was begun, contributing to the development of certain divisions of the museum. This homogeneous collection was now crammed into a group of galleries built upon the Commissioners' estate in South Kensington, opened by the Queen on June 22, 1857.

As time went by the Department of Science and Art outgrew its original administration as well as its galleries. It became part of the Education Department, merging eventually with the Board of Education.

Additions were being constantly made to its structure, and with the years it threw out offshoots with

[1] Now Queen's Gate

the customary vigour of a parent stem. Courts arose to north and south; so did a lecture theatre, refreshment rooms and upper galleries. More were to appear. Across the road newly constructed by the Commissioners sprang up secondary buildings to house the scientific overflow, and in 1872 a branch, remote indeed, was opened at Bethnal Green. By 1884 'The South Kensington Museum', a generic term, had come into reality in the form of a straggling collection of buildings which sprawled across the Commissioners' land and was described as having a "picturesque and almost rustic appearance of trees and flowers" to visitors approaching from the Brompton Road. In themselves the collections belied their rustic approach; by the 'nineties the French Inspector-General of Fine Arts was describing them as

> "the most fruitful source, the most colossal depot, of *objets d'art* of all sorts, and the most varied and complete types and examples capable of the development of artistic taste."[1]

In 1899 the existing buildings were begun by Sir Aston Webb who had won the competition for designs to cover the site occupying the angle at the junction of the Cromwell and Exhibition Roads. The last public ceremony of her reign was the laying, by Queen Victoria, of the foundation stone, and by her express direction it was to be known henceforward as the Victoria and Albert Museum, devoted solely to the fine and applied arts of all countries, and completely distinct from its scientific and specialised neighbours across the road.

[1] General Leaflet : Victoria and Albert Museum.

POSTSCRIPT

Henry Cole, who had been knighted in 1879, lived on into the 'eighties. His activities, multifarious as ever, had increased until they embraced departments of public life remote from the arts, and concerning aspects of health, working-class reform and education in general. He had been a member of the Society of Arts for thirty-six years; he had pushed forward any number of improving causes either through the Society itself or by other means. In a number of ways he had brought art within reach of the poor, and the promotion in 1851 of cheap paint-boxes for artisans on his initiative had, by 1870, achieved the spectacular result of eleven million sold at a shilling each. He sponsored reforms in museums and public libraries, in galleries and institutions. He helped to introduce drill as part of the standard education in every boys' school in the country, visiting schools all over the kingdom, and benevolently observing pauper children at their weekly drill. He undertook the reform, in one way or another, of London cabs, musical education, domestic economy, health and sewage, national health and water supplies; he secured the help of eminent sanitarians. Beside all this he must be credited with the original conception of the Albert Hall.

He has left a poignant account in his autobiography of that summer morning, eleven years after the Great Exhibition when he set out for Windsor to discuss with General Grey the report of a group of architects on a suggested memorial to the Prince Consort, lately deceased. Something personal had been discussed; some form of sculpture in Hyde Park for example, and

the commencement of Cole's latest project: a hall for Science and Art. They talked it over for a while, and later went up to the Prince's room. Cole noticed that his hat and gloves were laid out in the accustomed way. His desk, undisturbed, looked much as usual. Little was altered.

The Queen came in, composed and quiet. She enquired if he thought the suggestion for the Memorial was practical; confessed that she had no taste; used only to listen to Him; was not worthy to untie His latchet. Once before there had been talk of a statue, but *The Times* had objected, and the Prince had agreed that he ought not to have one in his lifetime: the Queen had been much struck by the solemnity of this thought. During the last year of his life she had had scarcely anything of his company. He had been always at the Horticultural Gardens in South Kensington. These new gardens, lying behind the Commissioners' buildings, with their arcades, their rhododendrons and their prize azaleas had absorbed so much of the Prince's time, they seemed in fact to interest him as much as the Great Exhibition itself. The Queen felt sure that it was at the Horticultural Gardens that the Prince had caught his fever . . . She also expressed a wish that the site of the 1851 Exhibition might be marked by four stones, one for each corner, as the Prince in his letter to Lord Granville had recommended, to record its major glories . . .

The idea was not carried out, and it is perhaps as well. The spirit of 1851 was impossible to recapture. That year was the watershed of its century. Other Exhibitions were to follow, so that in time the public would be surfeited. After that enthusiasm for mammoth fairs would dwindle and slowly flicker out. The period of imagination was over; so, too, was the belief, once convinced and passionate in the miraculous consequences of Free Trade. In 1854 had come the adventure in the Crimea, with its drastic winter of

sacrifice and ineptitude, its unnecessary suffering and lavish waste. The illusions vanished. With 1862 there had, indeed, been another Exhibition; still International, but this time somehow lacking the old fire. The Throne had been draped in mourning; the Prince had dropped out of the scene. Proceedings had lacked his guidance, his quiet discrimination. Its promoters had been as confused as ever, and more jealous than before. Its exhibits were more patent; less individual. It was an affair of mosaic floors and encaustic tiling. Its majolica walls had struck a new, a strange, an unexpectedly blatant note.

AUTHORITIES

Records of the Commissioners for the Exhibition of 1851. Documents relating to the Exhibition of the Works of Industry of all Nations. (Vols. I-X.)

First Report of the Commissioners for the Exhibition of 1851, London, 1852.

Second Report of the Commissioners for the Exhibition of 1851, London, 1852.

Royal Society of Arts. *Documents and MSS. relating to the Great Exhibition in its Preliminary Stages.*

Official Catalogue to the Great Exhibition of 1851.

Illustrated Catalogue of the Great Exhibition of 1851, published by *The Art Journal*, 1851.

The Victoria and Albert Museum.

Catalogue of a Collection of Works on . . . the Exhibition of 1851 in the possession of C. Wentworth Dilke, 1855.

Hansard, *Parliamentary Debates*, Vol. CXIV.

Babbage, Charles. *The Exposition of 1851*, London, 1851.

Bramah Lock Controversy, The, London, 1852.

Cole, Sir Henry. *Fifty Years of Public Work*, 2 vols., London, 1884.

Fulford, Roger. *The Prince Consort*, 1949.

Greeley, Horace. *Glances at Europe, etc.*, 1852.

Hobhouse, Christopher. *1851 and the Crystal Palace*, 1937.

Hunt, Robert. *Handbook to the Official Catalogues*, 2 vols., 1851.

Illustrated London News, 1850-1851.

Jagow, K. *Letters of the Prince Consort, 1831-1861*, 1938.

Kingsley, Charles. *Letters and Memories of his Life*, 2 vols.

Lectures on the results of the Great Exhibition of 1851, delivered before the Society of Arts, etc., 1852.

Listener, February 19, 1948.

Martin, Sir Theodore. *Life of H.R.H. The Prince Consort*, Vol. II, 2nd Edn., 1876.

Markham, Violet R., C.H. *Paxton and the Bachelor Duke*, 1935.

Mayhew, H. and Cruikshank, G. *1851 : or, The Adventures of Mr. and Mrs. Cursty Sandboys*, London, n.d.

Mintons, Ltd. *Papers and Correspondence relating to the Great Exhibition of 1851.*

Noble, Celia Brunel. *The Brunels : Father and Son*, 1937.

Punch, 1850-1851.

Rodgers, Charles T. *American Superiority at the World's Fair*, Philadelphia, 1852.

Ruskin, John. *Opening of the Crystal Palace considered in some of its relations to the Prospect of Art*, 1854.

Ruskin, John. *Stones of Venice*, 1851.

Reid, Wemyss. *Lyon Playfair, Memoirs and Correspondence of*, London, 1899.

The Times, 1850-1851.

Villiers, Marjorie. *Nineteenth-Century Commentary*, Quarterly, 1944.

THE LEGACY OF 1851:

PRINCIPAL INSTITUTIONS ON THE KENSINGTON ESTATE

MUSEUMS

Victoria and Albert Museum and Library
Science Museum and Library
Natural History Museum
Geological Museum and Survey
Imperial Institute
India Museum

TEACHING ESTABLISHMENTS

Imperial College of Science and Technology
Royal College of Science
Royal School of Mines
City and Guilds College
University of London, Examination Centre
Royal College of Art
Royal College of Music
Royal College of Organists
Institute and Lycees of the University of Lille

OTHER BODIES

Royal Meteorological Society
Royal Entomological Society
Commonwealth Institute of Entomology
Physical Society
British School at Rome, Administrative Offices
Warburg Institute
Royal Albert Hall
Royal Choral Society
Queen Alexandra's House
Royal Commission for the Exhibition of 1851.

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